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PAPER TRADE JOURNAL

ESTABLISHED 1872

THE INTERNATIONAL WEEKLY OF THE PAPER AND PULP INDUSTRY AND THE PIONEER PUBLICATION IN ITS FIELD

FIFTY-THIRD YEAR

Published Every Thursday by the
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LESLIE R. PALMER, President — GEO. S. MACDONALD, Vice-President & Treas. — F. K. HOPPIE, Secretary

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PAPER TRADE JOURNAL

With Which Is Combined

Vol. LXXX, No. 17 — Thursday, October 22, 1925

The Magazine of the Paper Industry

Technical Meeting at Kalamazoo Is Big Success

Fall Convention of the Technical Association of the Pulp and Paper Industry Is Well Attended and Is Interesting and Enjoyable Throughout—Reports From All the Committees Show That Great Interest Is Being Taken in the Work of the Association—Membership Continues To Grow—Those Who Attended.

[FROM OUR REGULAR CORRESPONDENT]

KALAMAZOO, Mich., October 19, 1925.—"The greatest thing about this meeting of technical men is the fact that so many of you are willing to gather here from all over the country and tell each other of the good things within your individual organizations," said Jacob Kindleberger, president of the Kalamazoo Vegetable Parchment Company, who took occasion Thursday noon to welcome the member of the Technical Association of the Pulp and Paper Industry to Parchment and the great industry in that community.

"It is the finest thing about this century and will be so recorded in the years to come that competitors in business have been willing to get together and speaking the truth, withhold nothing good from their neighbor. We are tickled pink to have you with us and to be able to entertain you."

Entertainment Committee Does Good Work

It was the final luncheon session of the fall meeting in this city and was followed by a general inspection of mills in the valley. The Parchment program included songs by the Parchment quartet and the closing remarks of President George K. Spence, who most highly commended the entertainment and hospitality offered the visitors. The splendid work of F. C. Clark, chairman, W. J. Lawrence and Ralph A. Hayward, entertainment committee, was particularly commended. They have been on the job every minute of the big show to do anything possible for the comfort and convenience of the guests.

President Spence declared that the TAPPI is in fine condition, having between 600 and 700 members enrolled, together with 40 corporate members. "My only regret is that the Kalamazoo valley list is so small," he added.

The Thursday session was devoted to the problems of paper drying and was under the joint direction of the committee on paper drying, W. Noyes Baker, chairman, and the committee on heat, light and power, R. W. Leeper, chairman. It was largely a technical discussion of problems confronted daily in the mills of the country. The reports will be continued and amplified at the spring meeting in New York.

Vocational Training

The importance of vocational training of workers for the pulp and paper industry was disclosed Wednesday morning when the Technical Association of the Pulp and Paper Industry opened its fall session and listened to the report prepared by M. L. Griffin, chairman of the training in industry committee.

The report, read by R. S. Kellogg of the News Print Service Bureau, showed that already more liberal opportunities have been extended to operatives in the pulp and paper industry, including more complete courses offered through correspondence, class work and a combination of both at a very moderate expense by the Division of University Extension of Massachusetts.

Report by R. S. Kellogg

The report adds: "Class work must be organized in paper making centers by those interested in such communities and as far as possible sustained by their own efforts, but the materials for the class work and correspondence supervision including special lectures will be provided by the division as far as possible.

"It will be one function of the committee's duties to foster and aid in creating a larger back-ground of those who can act as instructors in class work. To this end the committee will ask all technical men and any others who by long experience are qualified to give instruction to come to the assistance of the committee and take hold of this work wherever class work can be organized.

"The committee will also look to the New York State College of Forestry, which is the only institution of its kind in America giving a four year course in forestry and paper making to co-operate in giving exceptional assistance of this kind. It is the college's opportunity to aid its own graduates and make actual contact with the industry and to account to the people of New York for its stewardship.

"The committee will hold a meeting on Friday, October 23, at the Ten Eyck hotel, Albany, for the purpose of organizing the work and making definite arrangements for carrying it on. At the annual meeting in New York the chairman confidently expects to report substantial progress.

"In conclusion, the committee looks to the executive committee of the association to pave the way for its committee on training in the industry to co-operate with the vocational committees of the Superintendents and Canadian Technical Associations in order that there may be no duplication of efforts."

Report on Training in the Industry

Martin L. Griffin, chairman, also reported the formation of the committee on Training in the Industry, which in addition to himself includes: Dr. James A. Moyer, division of university extension of the Commonwealth of Massachusetts; Prof. R. T. Haslam, School of Chemical Engineering Practice, Massachusetts Institute of Industry; Prof. C. E. Libby, professor of pulp and paper manufacture, New York State College of Forestry; J. O. Mason, operating manager, Laurentide Company, Grand Mere, Quebec; Henry F. Obermanns, general superintendent Hammermill Paper Company, Erie, Pa.; Leon Yoerg, general superintendent fine mills, American Writing Paper Company, Holyoke; H. G. McDowell, sales engineer, Pusey and Jones, Wilmington, Dela.

Supplementing this report was the review of the work of the

Joint International Text Book committee, which during seven years has financed the publication of five important text books on pulp and paper. Sales to date amount to 11,628 volumes, while there is a steady enrollment of pupils taking the special courses.

President Spence Presides

President Spence called to order and called for reports of all special committees, which were given in brief.

The meeting was then turned over to B. W. Scribner, chief of the Paper Section, Bureau of Standards, Washington, and the morning was devoted to consideration of the standardization of paper testing methods and the comparison of methods of testing degree of sizing in a sheet of paper.

Report on Material Testing Methods

The report of the committee on standard methods for testing materials, prepared by M. A. Krimmel, assistant director laboratories, Hammermill Paper Company, said in part:

"After giving careful thought to the matter it is decided that certain policies regarding the organization and function of this committee should be defined and put into written form.

"Among other things, it was decided that the form of writing standard methods as used by the American Society for Testing Materials should be considered as standard for this committee.

"Methods for testing materials and specifications for materials already written by the American Society for Testing Materials will be considered as standard methods for this committee with added modifications wherever necessary to make such methods more applicable to the needs of our industry.

"Ten groups of materials of the pulp and paper industry were arranged as follows: 1. Bleaching powder, liquor and sludge. 2. Casein and coating materials. 3. Clay and fillers. 4. Surface sizing agents. 5. Lime and limestone. 6. Engine sizing agents. 7. Sulphate and soda sludge. 8. Sulphur. 9. Water. 10. Salt cake.

"The major portion of the time will be spent in reviewing, checking, revising, amending and adding methods for testing the materials listed.

"Each member of the committee will be responsible for one group of materials and it will be the duty of this member to thoroughly investigate the present standard methods for testing the material or materials in his group and to report at the time of the annual meeting in the spring of 1926, the result of the investigation with recommendations for alterations of the present standard methods."

Association Sound Financially

That the association is growing and in a healthy condition financially was shown by the report prepared by Miss Helen Kramer, assistant to the secretary. During the past year 70 names have been added to the membership rolls, which together with the reinstatements increases the number by fully 100. There are now 39 corporate memberships. The cash balance in the treasury is $6,933 against $5,684 a year ago.

Numerous committee reports were read as follows: Abstracts and bibliography, C. J. West; coating processes, D. V. Lowe; drying of paper, W. N. Baker; dye stuffs, C. C. Schneider; mechanical pulp, W. E. Brawn; sulphite pulp, B. S. Summers; Soda pulp, W. S. McClellan; sulphate pulp, R. M. Radsch; paper testing, B. W. Scribner. In practically all cases a satisfactory continuation of work was reported.

Radio Message From Sec. MacNaughton

At the Wednesday morning session President Spence read a radio message from Executive Secretary William G. MacNaughton, forwarded from Oslo, Norway, which read as follows: "Technical men in Oslo send best wishes for a successful meeting."

An interested visitor at the Wednesday session was J. de la Macorra, Jr., technical director of the San Rafael Paper Company, Mexico City. He is now enroute east and told of his pleasure at being able to stop over and meet with the TAPPI for at least one session.

Meeting on Waste

Papermakers are seriously and genuinely interested in the elimination of waste in the industry, also in the prevention of stream pollution. That was manifested at the enthusiastic session held Wednesday afternoon under the direction of the committee on waste, George D. Bearce, chairman, and John D. Rue, vice chairman. Two general topics were considered, one being a brief resume of the practical operation of stock savealls; the other introduced a proposal for the reducing of contamination of streams.

Mr. Rue introduced the topic of savealls, while Vance Edwards of the Forest Products laboratory opened the discussion of stream pollution. The liveliest discussion of the whole subject followed and numerous speakers gave their experience in the use of safealls. It was shown that millions have been spent in the last three years in the effort to eliminate waste and at the same time eliminate stream pollution.

"It is a two edged weapon," remarked Chairman Bearce, "for by the accomplishment of the first, you are also successful in reducing the latter evil. I am impressed by the desire of papermakers to obtain results along this line. They are making definite progress and our reports at the next spring meeting of the TAPPI should be even more encouraging.

Enjoyable Dinner

F. R. Clark, chairman of the local entertainment committee and his co-workers, arranged a well balanced program for the fall dinner. This event was attended by over 150 and was thoroughly enjoyed. President Spence introduced Dr. William R. McCracken of the Western State Normal School faculty as toastmaster.

Dr. McCracken declared that the chemist of today is more popular, more useful and more respected than in the centuries past. "Our American industry is developing so rapidly and competition is becoming so much keener that we need all the brains accessible to meet conditions," said Dr. McCracken. "The work men in your calling is doing is extremely valuable. I am looking forward to the time the chemist will be sitting pretty in industry; he will literally be on top of the world."

Congressman Elect Joseph L. Hooper, speaker of the evening, took for his subject, "The Constitution of the United States." Declaring that it is the fundamental law of the land that has given its people more of the luxuries and necessities of life and more opportunity for development and advancement than are enjoyed in any other country, he reviewed the history of the constitution; the conditions just preceding the meeting of the constitutional convention and the power that lies in the instrument.

"If ever The Almighty inspired the minds and hearts of men, he did it when those great men met in the capitol in Philadelphia to draft the constitution," said the speaker.

Following the address, entertainment features were furnished by Phineas Wheat and Robert Smith of the Kalamazoo Vegetable Parchment Company. In addition there was plenty of community singing and orchestral music interspersed to make the evening pass pleasantly.

Among Those Present

The attendance was good at all sessions and the interest in the programs was maintained throughout. Several of the papers read were reprints from the Technical Section of the PAPER TRADE JOURNAL and were offered to stimulate discussion on the points involved.

Miss Helen Kramer, assistant to the secretary, reported the complete list of registrations, which includes members of the TAPPI and many others who improved the opportunity to attend the sessions held in the west. Those present included: George J. Bolender, Arthur C. Dreshfield, L. A. O'Toole and C. J. Turner of the Western Paper Makers Chemical Company, Kalamazoo; Irvin

Austin and John H. Weimer of the Lee Paper Company, Vicksburg; J. O. Woodsome, Backus-Brooks Company, Minneapolis; H. D. Yoyed, Pemberthy Injector Company, Detroit; Ogden Minton, Vacuum Driers, Greenwich, Conn.; Thomas J. Keenan, *Paper Industry*, New York; R. E. Conklin, E. E. East and C. B. Neil, Michigan Paper Company, Plainwell; T. Kellberg, Drying Systems, Inc., Chicago; R. Skagenberg, Drying Systems, Inc., Chicago; E. A. Taylor and C. D. Wood, Grasselli Chemical Company, Cleveland; A. C. Duncan, Western Paper Makers Chemical Company, Kalamazoo; H. J. Rowley of Arthur D. Little, Inc., Cambridge, Mass.; Peter Abel, Stickles Steam Specialty Company, Indianapolis, Ind.; Allen Abrams, Cornell Wood Products Company, Cornell, Wis.; John E. Alexander, Nekoosa-Edwards Paper Company, Port Edwards, Wis.; C. E. Apelgren, Filer Fibre Company, Filer City, Mich.; A. C. Armstrong, Armstrong Machine Works, Three Rivers, Mich.; Parker K. Baird, Forest Products Laboratory, Madison, Wis.; Daniel S. Baker, P. H. Gladfelter Company, Spring Grove, Pa.; W. Noyes Baker, International Paper Company, Glens Falls, N. Y.; W. E. Byron Baker, Continental Paper and Bag Mills Corp., New York; Charles A. Bauer, Bauer Brothers Company, Springfield, Ohio; George D. Bearce, News Print Service Bureau, New York; Theobold C. Bentzen, Whiting-Plover Paper Company, Stevens Point, Wis.; Robert B. Best, Western Paper Makers Chemical Company, Kalamazoo; George W. Bicking, Bureau of Standards, Washington, D. C.; L. M. Booth, Booth Chemical Company, Elizabeth, N. J.; Ralph L. Bosworth, Crocker-McElwain Company, Holyoke; Walter Brecht, Hammermill Paper Company, Erie, Pa.; Harry L. Bradford, Rex Paper Company, Kalamazoo, Mich.; Homer F. Brundays, Kalamazoo Blow Pipe Company, Kalamazoo; Ray O. Brundage, Kalamazoo Vegetable Parchment Company, Kalamazoo; C. M. Bryan, Strathmore Paper Company, Mitteneague, Mass.; Olin W. Callighan, Allied Paper Mills, Kalamazoo; James A. Cameron, Cameron Machine Company, Brooklyn, N. Y.; Arthur E. Camp, Michigan Paper Company, Plainwell; F. T. Carson, Bureau of Standards, Washington, D. C.; C. C. Chaffin, General Engineering Company, New York; F. C. Clark, Hawthorne Paper Company, Kalamazoo; Max Cline, International Paper Company, Glens Falls, N. Y.; P. W. Codwise, Beaver Products Company, Inc., Buffalo; Grellet N. Collins, Dill & Collins Company, Philadelphia, Pa.; John Cornell, *Paper Mill*, New York; W. W. Cronkhite, General Electric Company, Schenectady, N. Y.; T. Linsey Crossley, Industrial Laboratories, Ltd., Toronto; C. E. Curran, Forest Products Laboratory, Madison, Wis.; William F. Dewey, B. D. Rising Paper Company, Housatonic, Mass.; Vance P. Edwards, Forest Products Laboratory, Madison, Wis.; O. S. Egan, Nekoosa-Edwards Paper Company, Port Edwards, Wis.; C. M. Eshelman, Cameron Machine Company, Brooklyn; G. F. Enderlein, Wausau Sulphate Fibre Company, Mosinee, Wis.; H. S. Faram, Watervliet Paper Company, Watervliet, Mich.; F. C. Farnsworth, Farnsworth Company, Providence, R. I.; Herbert H. Fish, Jr., Great Western Paper Company, Ladysmith, Wis.; J. A. Foxgrover, Western Paper Makers Chemical Company, Kalamazoo; Charles Fuhmeister, Oliver Continuous Filter Company, New York; O. P. Gephart, Miami Paper Company, West Carrollton, Ohio; William Y. Gilkey, Michigan Paper Company, Plainwell, Mich.; Otto J. Goeppinger, Armstrong Machine Works, Three Rivers, Mich.; William I. Goldsmith, Hawthorne Paper Company, Kalamazoo; C. S. Gravett, Western Union Telegraph Company, New York; H. W. Guettler, Fibre Making Processes, Inc., Chicago; James W. Hagar, Crane & Co., Dalton, Mass.; R. H. Harding, Bauer Brothers Company, Springfield, Ohio; Howard P. Hall, PAPER TRADE JOURNAL; R. O. Harper, B. D. Rising Paper Company, Great Barrington, Mass.; H. H. Harrison, Crystal Tissue Company, Middletown, Ohio; A. D. Harvey, Nash Engineering Company, South Norwalk, Conn.; George H. Harvey, Gardner & Harvey Company, Middletown, Ohio; R. A. Hayward, Kalamazoo Vegetable Parchment Company, Kalamazoo; C. L. Higgins, Funch, Pruyn & Co., Inc., Glens Falls, N. Y.; Rudolph Hueckler, Eddy Paper Corporation, Three Rivers, Mich.; H. W. Jasperson, Western Electric Company, Chicago; H. L. Joachim, Central Paper Company, Muskegon; Walter A. Johnson, Eddy Paper Corporation, Three Rivers, Mich.; E. Johnstone, Paper Makers Chemical Company, Holyoke, Mass.; L. E. Jonte, Hoberg Paper and Fibre Company, Green Bay, Wis.; W. H. Kenety, Northwest Paper Company, Cloquet, Minn.; R. P. Kite, Dorr Company, Chicago; Helen A. Kiely, American Writing Paper Company, Holyoke, Mass.; Arthur F. Klein, Hammermill Paper Company, Erie, Pa.; Paul Koenig, Continental Paper and Bag Mills Corp., New York; Otto Kress, Thilmany Pulp and Paper Company, Kaukauna, Wis.; W. J. Lawrence, Western Paper Makers' Chemical Company, Kalamazoo; Frank D. Libby, Kalamazoo Vegetable Parchment Company, Kalamazoo; J. S. Little, Western Electric Company, Chicago; L. E. Longstreth, Gardner & Harvey Company, Middletown, Ohio; C. L. Lupkin, Calvert Lithographing Company, Detroit; Jose de la Macorra, San Rafael Paper Company, Mexico City; H. F. Mahaley, P. H. Gladfelter Company, Spring Grove, Pa.; Marion Clarke, Champion Coated Paper Company, Hamilton, Ohio; J. D. MacMahon, Methewson Alkali Works, Inc., Niagara Falls; W. K. McNain, Northwest Paper Company, Cloquet, Minn.; William H. Monson, Forest Products Laboratory, Madison, Wis.; A. E. Montgomery, J. O. Ross Engineering Company, Chicago; C. E. Mueller, Western Paper Makers Chemical Company, Kalamazoo; C. G. Naylor, Naylor Spiral Pipe Company, Chicago; F. E. Pearson, Munising Paper, Munising; Harold L. Peckham, Hammermill Paper Company, Erie, Pa.; George S. Pierson, Kalamazoo; Michael Redmond, Kalamazoo Paper Company, Kalamazoo; E. O. Reed, Government Printing Office, Washington, D. C.; J. O. Ross, J. O. Ross Engineering Corp., New York; John D. Rue, Forest Products Laboratory, Madison, Wis.; C. Frank Sammet, Crane & Co., Dalton, Mass.; Thomas H. Davary, Jr., Chicago, E. R. Schafer, Forest Products Laboratory, Madison, Wis.; B. W. Scribner, Bureau of Standards, Washington; H. W. Server, Miami Paper Company, West Carrollton, Ohio; John H. Sherman, Huron Milling Company, New York; Joseph H. Slater, Escanaba Paper Company, Escanaba, Mich.; L. E. Smith, Nekoosa-Edwards Paper Company, Port Edwards, Wis.; George K. Spence, New York and Pennsylvania Company, Johnsonburg, Pa.; Arthur O. Spierling, Hammermill Paper Company, Erie, Pa.; Stephen A. Staege, Westinghouse Electric Company, New York; J. N. Stephenson, *Pulp and Paper Magazine*, Gardenvale, Que.; R. E. Strawbridge, Indiana and Michigan Electric Company, South Bend, Ind.; E. P. Strong, Munising Paper Company, Munising, Mich.; Charles R. Tait, Hammermill Paper Company, Erie, Pa.; John Traquair, Mead Pulp and Paper Company, Chillicothe, Ohio; E. C. Tucker, Chemical Paper Manufacturing Company, Holyoke, Mass.; P. Y. Tumy, General Electric Company, Grand Rapids, Mich.; A. G. Wakeman, Fox River Paper Company, Appleton, Wis.; A. Wiberg, Gilbert Paper Company, Menasha, Wis.; E. T. Williams, Kalamazoo Vegetable Parchment Company; Ben Wahl, Detroit Sulphite Pulp Company, Detroit; William J. Weed, Electro Bleaching Gas Company, New York; Frank F. Whittington, Kalamazoo Vegetable Parchment Company; F. M. Williams, Williams Apparatus Company, Watertown, N. Y.; George E. Williamson, Strathmore Paper Company, Mittineague, Mass.; J. L. Williamson, J. O. Ross Engineering Corp., Chicago; Robert B. Wolf, R. B. Wolf Company, New York; John C. Wood, Kalamazoo Vegetable Parchment Company, Kalamazoo; G. H. Young, Fulton Engineering Company, Middletown, Ohio; George W. Haskins, Drying Systems, Inc., Chicago, Ill.; H. Kildey, Standard Paper Co., Kalamazoo, Mich.; H. J. Rowley, Arthur D. Little, Inc., Cambridge, Mass.; and A. E. Woollam.

Ruths Accumulator Incorporates

DOVER, Del., October 19, 1925.—The Ruths Accumulator Company, Wilmington, steam apparatus, filed articles of incorporation here on Wednesday of last week through the Corporation Trust Company of America. The capital stock is placed at $600,000.

Demand For Paper In Philadelphia Expanding

Much Steadier Demand Is Reported, Especially For Fine Papers From Printers—Preparations For Holidays Stimulates Demand For Wrapping—Humber Arms Arrives With First Shipment of News Print From Newfoundland Power & Paper Co.—Considine Co. in New Offices

[FROM OUR REGULAR CORRESPONDENT]

PHILADELPHIA, Pa., October 19, 1925.—As the Fall days grow the paper trade is experiencing a broader distribution for all grades and varieties of paper in both branches of the industry. While the distribution of fine papers has been steadily improving it has not kept pace with the growing demand for all the lines of the coaser grades. Generally speaking, the paper markets, while not up to the standard, are making steady progress on the upward trend and are showing an improvement over the same period of 1925.

Steadier Market For Fine Papers

A much healthier and steady demand has been noted for fine paper. There has been a broader scope to the demand from the printing industries, particularly among the smaller establishments that were principally affected by the summer dullness. Printers have been going through an adjustment period as a result of the forced economy brought about among the consumers of mail matter on an extensive scale following the rise in the postal rate and consequent reduction in orders to the printing and direct by mail industries. Now that the allied industry is devising ways and means to meet the necessary economy in postage the printers are seeking more paper to meet requirements of reviving business. The paper men have been helpful in assisting the printer to meet the requirements of forced economy in mail matter and many new styles in cuttings and shapes of papers and in the production of specialties to meet these new factors of the printer's business have been brought out within recent days.

New Cuttings in Printing and Ad Papers

Among some of the new types or styles of cutting papers particularly in demand at this time in the printing and advertising industries are regulation bonds or coated papers used in circularizing by mail. They are now being specially cut with protruding flaps on the outer margins so that illustrations may accompany the latter in boxed printed forms of various shapes, combining ad matter with descriptive and sales letters. Another emergency has been met in the way of economy in the production of papers that are so manufactured that one side is of the straight bond letter papers in white with coated opposite side in any color desired for illustrating and ad matter, perfecting a combination for the printer and advertising man and the consumer through this combined letter and coated paper in two tones, the latter of course, being in white background is easily discernable and the colored side will naturally attract the attention because of its uniqueness.

Coarse Papers Respond to Pre-Holiday Markets

Pre-holiday preparation and the resumption of many manufacturers in this city on a livlier scale of operations have proved beneficial factors in the revival of demand among the coarse paper grades. The mercantile industries just now are the heaviest consumers of wrappings in anticipation of coming holidays. The textile industries, though slightly improved in their business, still are not up to normal and, of course, while consuming larger quantities of papers their requirements are not moving from warehouses in the volume that might be expected with this season. Other manufacturing enterprises, too, have been increasing their stocks of papers.

Fall Conference Topic of Trade Meeting

Details of the Fall Conference held in Chicago last week were disclosed to the local fine paper dealers by President Morgan H. Thomas, of the Philadelphia Paper Trade Association and David Lindsay, Jr., the chief executive supplementing the report made by the latter in a brief address. The meeting in the Bourse restaurant also was given over to the discussion of plans for the coming Sesqui-Centennial Celebration and the initial steps were taken towards preparation for the paper exhibition to be held co-jointly with that of the Philadelphia Typothetae. The trade was much impressed with the possibilities for a comprehensve exhibition of the paper industry by the recent tour of the Sesqui Grounds under the guidance of Colonel Collier, of the Exposition Commission, and arranged by President Morgan H. Thomas and Vice-President Simon Walter, who were hosts to the poper men at a luncheon on the Grounds during the trip.

Paper Stock Sluggish

Continued sluggishness has been dominating the stock market, with very little mill demands of any source. With little stocks on hand and not much coming into warehouses there is an evenly balanced market in the supply and demand of the raw materials. Prices therefore are holding firmly.

Considine Co. in New Offices

The offices in the newly constructed Ledger Building, just completed, at Sixth and Chestnut streets, which were leased several months ago by the Considine Company, a subsidiary of the Paper House of Pennsylvania, 28 North Sixth street, although operating as an entirely separate concern, now are ready for occupancy and the firm is removing to its new location this week. Although the Considine Company has been organized ever since last winter, it has been occupying temporary quarters in the building devoted to the business of the Paper House of Pennsylvania. The president of the Paper House of Pennsylvania, Norbert A. Considine, will also remove his executive offices to the new home in the suite of offices No. 716 in the Public Ledger Building, overlooking Independance Sq. Besides the office of President Considine there will be located in the new quarters the foreign sales manager, Charles Guerrero, who takes care of the Latin-American business and exportation of paper, and Jack T. Cooper, formerly head of the exporting and importing department of the J. L. N. Smythe Company, and who has under his supervision the import business of the Considine Company. With the new offices for the company the two paper houses controlled by the Considines, Norbert A. and Raymond J. Considine, will be segregated, the paper distribution being entirely confined to the North Sixth street headquarters, while the importing and exporting branches will be the sole concern of the Considine Company. In the new quarters in the Ledger Building there also will be located the Finnish Vice-Consul headquarters, President Norbert A. Considine having been appointed Vice-Consul to Finland shortly after the formation of the Considine Paper Company, and is the first American to have been distinguished by this honor.

New Paper Shipping Service to Philadelphia

A new British vessel especially built for carrying news print arrived in Philadelphia on Thursday of last week with a consignment of 2,000 tons of paper for this port. The new steamship, the Humber Arms, arrived here from its maiden voyage and after discharging part of its cargo at this part proceeded on its way to points in the South and Gulf Coast. The vessel is the first of

(*Continued on page 70*)

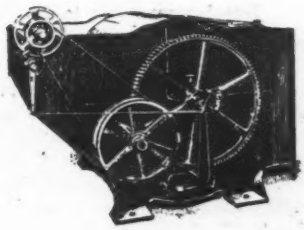
A side of your mill you don't often see

The entrance and exit sides of your mill are carefully watched to prevent loss of raw materials or finished paper.

But there is another side, the side facing on the river that bears equally close scrutiny. White water that is allowed to escape may be taking toll **in between** raw materials and finished product.

The Bird Save-All is a practical white water recovery unit that automatically extracts the valuable fibres from the white water. Installation, operation and maintenance costs are extremely low.

Let us tell you more about the Bird Save-All.



The
Bird Save All

BIRD MACHINE COMPANY

South Walpole, Massachusetts 8460

BIRD MACHINERY

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Cut in News Print Will Greatly Decrease Revenue

Lower Rate for 1926, Just Announced, Will, It Is Estimated, Cause a Reduction In Earnings in Canada, as Compared With the Old Figures of $7,000,000 For Next Year—Projected Developments Not to be Affected by Death of J. B. Duke

[FROM OUR REGULAR CORRESPONDENT]

MONTREAL, Que., October 19, 1925.—It is estimated here that with the news print production in Canada running around 1,400,000 tons the cut in price to $65 a ton for 1926 will mean a reduction in gross earnings as compared with the old figure of $7,000,000 for next year. It may be assumed that a portion of the reduction in price will be absorbed by increased economics in manufacturing, but hardly the full amount by any means.

It is recognized that the industry is in a transition stage owing to the mills being forced to accommodate themselves to surplus capacity, to the extent of nearly 1,000 tons daily, or about 10 per cent of actual production. This condition has developed only during the past year or so and promises to reach its most acute form early in 1926. It is in anticipation of present conditions becoming even more accentuated that contracts are being made by the Canadian and United States mills to supply news print after January 1, 1926, at a rate of $65 a ton or even lower, compared with the present rate of $70 a ton; a rate of $73 a ton for the latter half of 1924, and $75 a ton prior to that. These prices are low compared with the peak of $130 a ton reached in the first quarter of 1921—exactly double the rate that will probably apply at the beginning of next year. At the same time current prices are up from 70 to 75 per cent compared with the average price that prevailed before the war, or from $38 to $40 a ton.

Development Not to Be Interrupted

As showing the tendency to lower gross and net profits, the Spanish River statement for the year ending June 30, 1925, is taken as an example. As a result of a reduction during the past year from $75 to $70 a ton, its gross was about $1,200,000 less than the previous year, and its net about $1,000,000 less. Laurentide for the fiscal year ending June 30 last also showed a decline in manufacturing profits from $3,058,350 to $2,631,395, a drop of over $400,000, while there was a margin over dividend requirements of only .63 of one per cent as compared with one of 1.24 per cent the previous year, after a much smaller provision for depreciation this past year.

The recent death in New York of J. B. Duke, tobacco manufacturer and financier, was a severe blow to the Province of Quebec in view of his large interests in the province in connection with the Duke-Price hydro development schemes at Grande Decharge and Chute a Caron, but it is learned that the projected developments in which Mr. Duke had interests said to reach over $100,000,000, will not be affected. Major J. H. Price, president of Price Brothers, Limited, has intimated that Mr. Duke had provided against the contingency of his death in connection with the developments in this province, and, as a result, the plans already under way will be uninterrupted by his sudden demise. Major Price and Premier Taschereau both expressed the deepest regret at the passing of one who, although an American citizen, had done so much for the industrial welfare of this province, as, in addition to the two important hydro-electric developments mentioned, it was Mr. Duke who was instrumental in the bringing to the Lake St. John district of the huge plant which is under construction there by the Aluminum Company of America. By a strange coincidence, Mr. Duke passed away a year after his partner in the Grande Decharge 800,000 h.p. deal, Sir William Price, who lost his life tragically in a landslide on the 2nd of October, 1924. It was J. B. Duke who, in addition to the Grande Decharge and Chute a Caron works, backed the construction of the Aluminum Plant in the Lake St. John district. Mr. Duke's interest in the development of water power arose when he conceived the idea of discovering a method of producing cheap fertilizer for the farmer. He had a scheme for the production of phosphate from rock by means of electricity, a method which he thought would be more inexpensive than the use of acid. He bought extensive water power rights in South and North Carolina and organized the Southern Power system. Latterly, he had been interested in a gigantic development on the Saguenay River.

Trying to Bar Canadian Paper from Australia

News has been received here that a new attempt is being made in Australia to bar from that country Canadian news print, the market for which has just been re-opened through the operations of the new Canadian-Australian trade agreement. The Amalgamated Zinc Company, of Melbourne, a very large and successful mining concern, has made representations to the Commonwealth Tariff Board, urging highly protective duties on news print in rolls and sheets, printing paper in rolls and sheets and typewriting paper. If such duties are imposed the company agrees to instal a large pulp and paper plant in Tasmania, where it has extensive mining interests. The company, with a view to the carrying out of this plan, has secured an option on 130,000 acres of freehold land and has also secured from the Government of Tasmania the exclusive right to cut timber for pulp purposes on 600,000 acres of Crown lands. The company agrees, at the same time, to carry on from the first a policy of reforestation along the best scientific lines. In place of the customs duty of £3 per ton, $15, the company urges a new duty of £6 on news print from the United Kingdom, which, under the trade agreement, would include Canada, and of £9 per ton from other sources of supply. An alternative suggestion apparently is that a specific duty of 40 per cent be imposed on pulp, news print, printing and typewriting paper. As an alternative to the customs duty, the company suggests a bonus of £6 per ton on all paper that would be produced at their mills. Opposition has developed from the Australian Newspaper Conference which includes in its membership all the leading city and country newspapers as well as manufacturing stationers. It is declared that the expectations of the company are not based upon reliable data. The question has not yet been settled, and an effort will be made to secure a favorable action by the Commonwealth Parliament now in session, as the option on 120,000 acres of freehold forest land in Tasmania is said to expire on the first of next September.

Authorize Liquid Sulphite Pulp Line

AUGUSTA, Maine, October 19, 1925.—The Governor and Council issued an order last week granting the application of Frazer Paper, Ltd., and authorizing the corporation to install upon that part of the substructure and superstructure of the international bridge over the St. John River between Madawaska, Me., and Edmundston, N. B., and within the State of Maine, two wooden stave pipe lines for the transmission of liquid sulphite pulp, in a solution of water, from the mill of the company at Edmundston to its mill at Madawaska.

In granting the application the Governor and Council have imposed numerous terms and conditions upon the petitioning corporation in order to safeguard the interests of the State and the public. A rental fee of $500 a year is to be paid to the State of Maine by the Frazer Company, and all erection costs will be borne by the company.

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Paper Co.
Terre Haute, Ind.

INDIANA

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Now we also build the Dilts approved NEW TYPE Beating Engine which accomplishes the hitherto impossible combination of fast circulation, Heavy Furnish, Rapid Mixing and Beating, Quick Dumping, and **no increase in power consumption.** The Dilts approved NEW TYPE is truly a remarkable Beating Engine.

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What Paper Men Are Doing in Fox River Valley

Wisconsin Paper & Pulp Co. to Rebuild Its Dam Spanning the Wisconsin River—Walter Alexander, President of the Wausau Mills Co., Gives Park to Brokaw—Athletic Field Donated by Geo. A. Whiting to Lawrence College is Dedicated

[FROM OUR REGULAR CORRESPONDENT]

APPLETON, Wis., October 17, 1925.—That the Wisconsin River Paper and Pulp Company plans the raising, enlarging and rebuilding of its dam spanning the Wisconsin River just north of the Whiting-Plover Company's dam in the town of Plover, is indicated by the filing of an application for permission with the Wisconsin railroad rate commission at Madison. A public hearing on the petition has been set by the commission for November 12 at Madison. All persons who may be affected by the change in water level have been notified of the hearing.

What changes the raising of the dam will effect in the mill are not at present definitely known, but the increased elevation, it is stated, will be for the purpose of replacing antiquated pulp grinding machinery and to provide further power.

Preparations for the raising of the head of the water have been under way for some time, the Wisconsin River company having purchased or secured water flowage rights, it is stated, upon all the land bordering the river between its mill and the dam and the power house of the Consolidated Water Power and Paper Company property in Stevens Point.

According to records in the register of deeds office at the Stevens Point courthouse, the Wisconsin River Paper and Pulp Company paid the Consolidated company, or rather the Oneida Power Company, as the power project is called, $50,000 for a grant of right. This payment was made for the right to set back the water in the river up to the tail race of the Oneida Company dam, and to hold back the water at the elevation for which the Wisconsin River Paper and Pulp Company now petitions the railroad commission.

Walter Alexander Gives Park to Brokaw

Walter Alexander, president of the Wausau Paper Mills Company, Brokaw, on Monday of last week handed to Mayor Emil Flatter of Wausau and the members of the Wausau park commission, the deed to the land north of the Public Library building, to be used perpetually as a public recreation park for that city.

Mr. Alexander about ten years ago also donated the land which has since been made into a beautiful park, south of the Public Library building. He named it "McIndoe Park" after the late Senator W. D. McIndoe, an uncle of Mr. Alexander, who lived for many years in a house on this plot.

The donor of the park came to this country from Glasgow, Scotland, when about ten years of age, and several years later made his home with Senator McIndoe who became a father and friend to him. In memory of this man the whole park is now called by this name, and the new addition just donated will take on the same name, "McIndoe."

About two years ago Mr. Alexander started on his project of doubling the size of the park, and he bought the Dr. Sauerhering residence and the land adjoining, removed the house, filled in the land by having hauled thousands of wagon loads of earth, and with the aid of skilled artists has converted it into a gem with a quaintly shaped pool, stocked with gold fish, with grassy lawns and with shrubbery and flowers, all offering to the eye a scene of unusual attractiveness and beauty.

McIndoe Park now covers nearly two blocks and is located in nearly the exact center of the city near the business section, and is within reach from all directions. Wausau residents will appreciate this park not only from the viewpoint of civic pride, but also because it will enhance the value of the surrounding property.

G. A. Whiting Gives Athletic Field

George A. Whiting, Neenah paper manufacturer and philanthropist, who has donated to Lawrence College of this city its new athletic field and Field house to be known as the George A. Whiting Field and which will be formally dedicated tomorrow, was host to 30 members of the Delta Sigma Tau fraternity of the college last Saturday at the Whiting hotel in Stevens Point and the Whiting-Plover paper mill.

Two of Mr. Whiting's cars were furnished to make the trip from Appleton to Stevens Point. The fraternity pledges, Dr. Henry M. Wriston, new college president, and the Rev. S. Cookson, patron, also made the trip.

The party left Saturday morning and arrived at the hotel at 10 o'clock where they were welcomed by the manager. From there they proceeded to the paper mill where they were met by Mr. Whiting.

Three guides were assigned to take the visitors through, starting from the initial stage of the manufacture of paper exclusively from rags. The party was conducted step by step through the different processes under which the rags are treated until they reach the final treatment for rolling. Special attention was given to the chemical processes that are administered to the raw rags to bleach and purify them for their use in the making of fine paper. At the finish of the trip through the mill, each of the members was presented with a package of bond paper, as a souvenir.

Following the mill trip, Mr. Whiting met the fraternity at Whiting hotel where a banquet was served. Mr. Whiting acted as toastmaster and called upon President Wriston and E. A. Oberweiser, president of the First National Bank, Stevens Point, for short talks. Mr. Oberweiser brought out the point of Mr. Whiting's foresight.

Notes of Personal Interest

Fred C. LaBrot, manager of the Stevens Point plant of the Consolidated Water Power and Paper Company, was called to Aberdeen, Wash., last Saturday in response to a telegram announcing the unexpected death of his mother. Mrs. LaBrot was 73 years of age and a pioneer resident of Wisconsin Rapids. She is survived by three sons and a daughter.

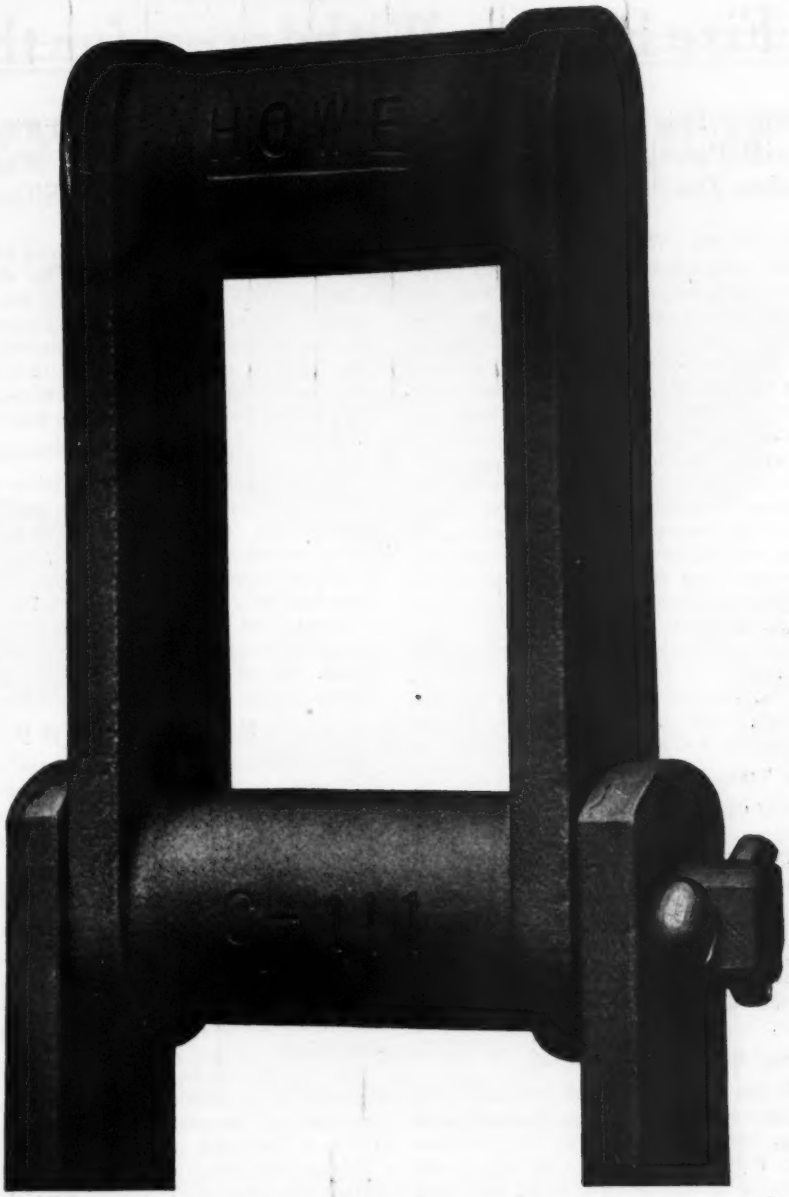
E. W. Young, one of the superintendents of the Kimberly paper mill of the Kimberly-Clark Company, has been giving a series of talks to foremen's clubs and other organizations of employes on the National Safety Congress which he attended recently in Cleveland.

Commercial Envelope Co. to Build Box Plant

BALTIMORE, Md., October 19, 1925.—The Commercial Envelope Company will establish, in connection with its envelope business, a paper box department, according to the Industrial Bureau of the Association of Commerce.

This company moved into new and larger quarters in the Candler Building nine months ago from 308-10 South Hanover street. Additional space is being taken over in the Candler Building in order to provide for the new box department, and to furnish additional storage and shipping room space.

The paper box department will have a daily capacity of about 5000 boxes. Howard S. Jones is manager of the company.



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Ontario Fire Rangers Withdrawn for the Season

Forest Conflagrations This Season Less Serious Than in Recent Years—Efficiency and Effectiveness of Aerial Patrol Assists Ground Employes in Their Splendid Work—Mattagami and Backus Developments Progressing Favorably—Pulp Wood Situation

TORONTO, Ont., October 19, 1925.—The Ontario Forestry Department has withdrawn the ground employes, better known to the public as fire rangers, for the season, and the majority of the men have left for their homes after a somewhat busy period. There were not as many fires in the forest during the past summer as in some former ones. Those which did break out were promptly extinguished, without a very heavy loss. The hydroplane patrol, which has seen two years of service, did splendid work and was found to be of distinct benefit in detecting and reporting fires, in addition to conducting survey and estimating work in connection with the standing timber of the province. The hydroplanes will be in use for some time yet. Only one accident befell the airplane service of sixteen planes this season. This was when a plane dropped in a small lake near Bonheur. None of the crew was injured although the machine was damaged. The fleet of machines will winter at Sault Ste. Marie, Ont., where a large aerodrome has been built. On the whole Ontario has enjoyed a very fair year in the exemption of serious forest conflagrations and the Hon. James Lyons, Minister of Lands and Forests, and E. J. Zavitz, chief provincial forester, are well pleased with the good work, not only of the large force of rangers, but also the efficiency and effectiveness of the aerial patrol.

Paper Trade Men Convene

The annual convention of the Canadian Paper Trade Association is being held in Montreal this week at the Windsor Hotel. R. I. Finlay, of the United Paper Mills, Toronto, is head of the organization, N. L. Martin, Toronto, secretary, and E. S. Munro, Toronto, treasurer. The members of the association will be entertained to a dinner by the trade in Montreal. W. C. Ridgway, of New York city, secretary of the National Paper Trade Association of America, has been invited to be present and to deliver an address. Mr. Ridgway has many friends in Canada and is always a welcome visitor.

More Spruce Going Into Pulpwood

Recent advices indicate that more spruce in the Ottawa Valley and other points in Ontario will next season go into pulp wood than lumber owing to the low price of the latter and over production at the sawmills. It is also learned that the cut of pulp wood in the province of Quebec will be on a larger scale than usual. When the spruce situation becomes inactive most producers turn to supplying this wood to the pulp and paper mills which are steadier in their demand than has characterized the lumber consumption for some time. In regard to lumber in general, much will depend upon the action of the banks in financing woods operations, and the opinion is expressed that some of the banks are not inclined to furnish money for more extended activities. There is an abundant supply of labor now in all the pulp wood and lumber camps owing to the return of many men from the western wheat fields.

Good Progress Made by Mattagami

The Mattagami Pulp and Paper Company, of Toronto, whose sulphite pulp plant is located at Smooth Rock Falls, Ont., is getting busier all the time and is now turning out about one hundred and eighty tons daily. The entire output is sold and this is attributed to the gradual improvement in the market and better business conditions generally. The company is making good progress in the installation of its bleaching equipment and will bleach about half its output. Some of the debenture holders of the company, which has been run for the last two or three years by a receiver, are formulating a plan to reorganize the concern, and the plan has been agreed to by a majority of the debenture holders. Under it, a new company will be formed and the first mortgage bonds of the old company will be paid off. Bonds in the new company will be sold to pay off the bond holders.

Ball Team Wins Championships

The ladies' baseball team of the Hinde and Dauch Paper Company, of Canada, were successful in winning the Ontario soft ball championship. The Hinde and Dauch girls have had an enviable record and are a strong aggregation, having captured the Toronto city championship five years in succession. The members of the team have been generously supported by O. H. Moore, general manager of the company. Mr. Moore came to Canada 15 years ago from Sandusky, Ohio, and has proved to be a very popular citizen. He is commodore of the Parkdale Canoe Club and a leading member of many sporting and fraternal organizations.

Notes and Jottings of the Industry

H. B. Donovan, sales manager of the Canada Paper Company, of Toronto, spent the past week in Montreal on business.

W. B. Bailey, of London, western representative of the Interlake Tissue Mills, Toronto, is on a business trip to Winnipeg and other points west.

Arthur Jewett, of Montreal, eastern sales manager of the Provincial Paper Mills, Toronto, was married recently to Miss Marsan and is receiving the congratulations of his friends in the industry.

Harold A. Miller, secretary and sales manager of the Continental Paper Products Company, Limited, Ottawa, was wedded lately to Miss Hazel M. Dwyer, daughter of W. H. Dwyer, Ottawa. The young couple left on a motor trip to New York city and other points.

The Forestry Service Company, Ltd., Ottawa, is a newly formed organization to conduct timber and pulp wood cruises, scaling, measuring of logs, etc. The capital stock is $20,000, and H. H. White, of Pembroke, is one of the incorporators.

Edward McWhirter, of Georgetown, Ont., superintendent of the Barber division of the Provincial Paper Mills, is rapidly recovering, after undergoing a rather serious operation.

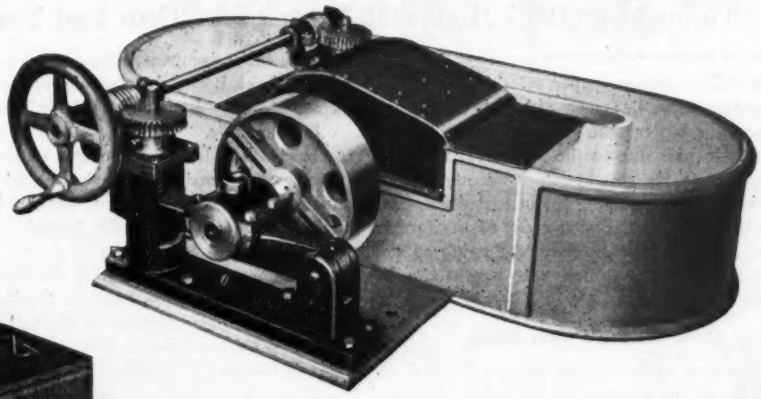
George T. Allen, of the Buntin, Reid Company, wholesale paper dealers, Toronto, has returned from spending a few days in Montreal on business.

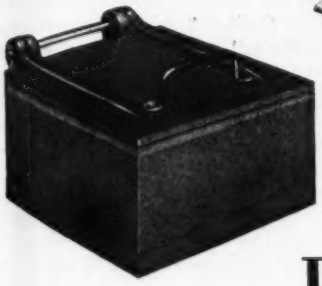
The Port Arthur division of the Provincial Paper Mills, Toronto, has erected a new acid tank and is making other improvements to the bleaching equipment of the plant.

Sir Mark Sheldon, of Carmichael & Company, Sydney, Australia, who was Australian Commissioner to Washington during the war, is spending a few days among the paper trade in Toronto and Montreal, making arrangements for imports of news print and other lines of paper.

The stock, plant and equipment belonging to the Ross Can Company, Ltd., of Bowmanville, Ont., which turned out fiber and other makes of cans, are being sold and the business wound up under the direction of the Trusts & Guarantee Company, Ltd., of Toronto. The machinery amounts to about $85,000 and the stock on hand to $30,000.

VALLEY LABORATORY EQUIPMENT





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Marathon Paper Mills Co.
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The Richardson Company
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Fox River Paper Co.
Upson Company
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APPLETON, WISCONSIN

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Demand in Chicago Shows Considerable Gain

Satisfactory Expansion in Business Expected to Continue—Coarse Paper More Encouraged Over the Outlook—Interesting Graphs on Coarse Paper Show Sales and Prospects Throughout 1925 Higher at Every Point Than Last Year

[FROM OUR REGULAR CORRESPONDENT]

CHICAGO, October 19, 1925.—Chicago paper sales for the month are above those for the same time last year, although the increase in the percentage of profit is larger than the increase in the percentage of sales. This is in part due to the regular fall increase in business of the coarse papers, the resumption of the use of more paper by thousands of kinds of businesses, and in part due to such economic conditions as the effect of the good crops of the farmers and the building boom which apparently is never going to end. Even better business is expected as the new year approaches, because of preparations for the year 1926.

Apprehension Over Higher Postal Rates

Some apprehension has been expressed by the members of the fine paper division because of the increase in the postal rates and the consequent bad effect on the prices of printing paper. The business of the printers of course is correspondingly bad, but even at that there is no scarcity of work for them. The printers are at least at work, and are using about their usual quota of paper.

More Activity in Fine Papers

Better sales have been announced in the fine paper business, which is running along in fine shape with the general trend of business. It has been expressed that in the northwestern part of the middle west, the business is rather spotty, with its little freaks of good and bad, but in general there are no indications apparently of any more inquiries, more and larger orders, and an increase of September and October business over last year. In fine papers, there is little change in margins and percentage of profit. With the rest of the paper trade, the fine paper men are looking forward for the lift that always comes at the end of the year. They are still puzzled as to why the expected increase in June business has never come.

Coarse Paper in Better Position

The coarse paper dealers compliment themselves that the margin of profit has been increased as well as the sales, and in fact more than the percentage of sales. The houses are carrying a sixty day stock. Their business generally is much better than the same time last year, as it has been almost through 1925, and the next two months are expected to bring even greater success in making business better than last year. Optimism runs through the trade, especially with the coarse paper men.

Standardization of Tissues

The standardization of tissue and the thousand sheet unit (instead of the ream unit) for printers, as adopted at the convention of the National Association last week have changed the policies of the companies here in those two and the other lines discussed, and the companies are preparing themselves for the changes.

Interesting Price Graphs

One of the more progressive merchants of coarse papers has two interesting graphs in his office, showing the increase in sales and the increase in profits for the year, step by step. At every point, the line for 1925 is higher than last year's, although in one or two places it is lower than 1923.

General News of Chicago Trade

The Berkshire Paper Company, 838 West Congress street, has been taken over by the Berkshire Hills Paper Company, of Adams, Mass., and will continue as a subsidiary and the Chicago branch of the latter company, under the direction of Fred H. Pim, treasurer of the Berkshire company and agent for the Berkshire Hills company. The Berkshire Hills will handle all the business of the other company.

H. M. Royale, sales manager of the Messinger Paper company, has just returned after a trip through the west, where his touring included a visit to the Los Angeles Branch of the Butler Paper company, of Chicago—the branch is named the Sierra Paper company.

A happy social meeting of the National Association of Waste Material Dealers was held on October 8 at the Congress Hotel, when returning delegates to the fall meeting at Memphis, Tenn. on the 6th came through Chicago. The meeting was more of a dinner and entertainment than a business meeting, because all the business had been discussed in Memphis. There were many members of the Old paper men present, including members of the national and local associations from the west and Canada. Those represented from Chicago included the Continental Paper Grading company, the Chicago Mill Paper Stock company, and the United States Paper Supply company. The meeting was ably handled by L. J. Messinger, of Chicago, the Secretary of the Western Division.

The J. W. Butler Paper company, 221 West Monroe street, is sending to the trade samples of its American Trust Bond, marked characteristically with the Butler trade mark, a yellow seal with a blue ribbon pictured streaming from underneath the seal. The elegant printing in the interior of the folder says that it is a standardized paper, insuring every sheet to be of uniform quality and appearance; and it is stocked in four basic weights, six sizes, and a large variety of colors, with envelopes to match.

Good Paper Demand Continues in Boston

[FROM OUR REGULAR CORRESPONDENT]

BOSTON, Mass., October 16, 1925.—Boston continues to enjoy good business. This is a general term but applies more specifically to the paper trade. Various industries upon which the paper merchants rely, to a large degree, for business, are on the upgrade. Reports from the shoe centers, a few textile cities, candy manufacturers—these and many others—show a decided improvement. This good business reflects into the paper district.

The ever-present complaint of hand-to-mouth buying prevails, of course, but the general concensus seems to be that this policy is not quite as prevalent as in months past. The small purchaser is still on hand, however, but the volume has increased. One of the most healthy signs in the Boston market recently is the gradual easing-down of the price-cutting situation which for some time has been quite noticeable in the coarse paper division, more particularly, it is said, among a certain class of Kraft dealers.

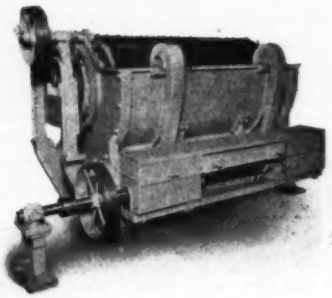
Fine paper houses are enjoying a good season. Just now the printers are near their peak trying to fill heavy demands, and in turn their demands upon the houses handling their grades are equally heavy.

The news and chip board houses report business about the same with no price changes and thus far no price cutting has manifested itself. Roofing and rag stock prices have receded a little. The mills, reports show, are heavily stocked. One salesman added: "They're not buying a pound."

Scrap burlap, gunny bagging and old bagging for covering cotton, have advanced in price and the market is strong. This situation, it is explained, is due chiefly to the reported shortage of jute.

Does Clean Paper Interest You?

Cleanliness in a sheet of paper will be assured if the stock passes through a



"Moore & White" Improved Flat Plate Rotary Screen

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The Moore & White Co.,
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Gentlemen:

The two Moore & White Company rotary screens, installed in June, have just completed their first full month of operation. They have proven completely satisfactory and, I am happy to say, the production for the month was the highest ever obtained on the machine.

Yours very truly,
(Name of Mill on Request.)

Mills now using "Moore & White" Rotary Screens gladly testify to the excellent results obtained by their use on all grades of paper. ***Write us for complete information.***

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GREETING PARCHMENT—No. 205,666. Swarthwood-Nelson Paper Company, Minneapolis, Minn. For writing paper.

JERPACO—No. 213,394. New Jersey Coated Paper Company, Montclair, N. J. For surface, coated printing, writing, wrapping book and cover paper.

CLAIRFOLD—No. 213,396. New Jersey Coated Paper Company, Montclair, N. J. For same as above.

September News Print Statistics

Production of news print in the United States according to the News Print Service Bureau during September, 1925, amounted to 121,019 tons and shipments to 127,409 tons. Production in Canada amounted to 124,704 tons and shipments to 124,689 tons, making a total United States and Canadian production of 245,723 tons and shipments of 252,098 tons. There was also 9,818 tons of news print made in Newfoundland and 913 tons in Mexico in September, so that total North American production for the month amounted to 256,454 tons and for the first nine months of the year to 2,305,849 tons. The news print mills also made 2,193 tons of hanging paper, 762 tons of which were made in Canada. Stocks of news print paper at United States mills totaled 27,326 tons at the end of September and at Canadian mills 22,864 tons, making a combined total of 50,190 tons which was equivalent to 4.6 days' average production. During September the United States mills operated at 86.6 per cent of capacity and the Canadian mills at 95.0 per cent.

Comparing production during the first nine months of 1925 with same period of each of the five previous years the United States mills made 2 per cent more than in 1924, and about the same as in 1923, 5 per cent more than in 1922; 23 per cent more than in 1921 and 1 per cent less than in 1920; the Canadian mills produced 10 per cent more than in 1924, 18 per cent more than in 1923, 40 per cent more than in 1922, 92 per cent more than in 1921 and 68 per cent more than in 1920.

The combined production of the United States and Canadian mills for the first nine months of 1925 was 6 per cent more than in 1924, 8 per cent over 1923, 20 per cent over 1922, 50 per cent over 1921, and 24 per cent over 1920. There was a production of 59,381 tons in Newfoundland and 9,502 tons in Mexico during the first nine months of 1925.

International Cuts News Print Price

The International Paper Company announces a reduction in the price of standard news print in rolls at $3.25 per 100 pounds, f. o. b. mill, in carload shipments, effective January 1, 1926, to its contract customers in the United States, for the calendar year 1926.

Explaining this reduction, J. L. Fearing, vice-president of the company, writes:

"At this reduced rate many mills in the United States will, in our opinion, be unable to operate at a profit. This situation will be emphasized if Canada should further restrict or prohibit the exportation of her pulpwood.

"But with added low cost capacity at Three Rivers, Que., which will raise our output there from 340 to 700 tons daily, together with the immediate construction of another equally efficient unit on the Gatineau River near Ottawa, we hsall have ample capacity to care for all probable requirements on an expanding scale.

"After careful canvass we find that conservative publishers do not consider it in their interest to have the price of newsprint paper too greatly reduced. The recognize that stability and fair profits for efficient paper mills are greatly to be desired, that too low prices for newsprint now might involve a wide swing upward later on."

William P. Birnie Dead

[FROM OUR REGULAR CORRESPONDENT]

SPRINGFIELD, Mass., October 19, 1925.—William Perkins Birnie, 75, for many years head of the Birnie Paper Company, the well known papeterie concern at Brightwood, died Saturday at the home of his son, Dr. John M. Birnie of Atwater Terrace.

He was born in Becket in 1849, coming to Springfield in 1852 with his parents. After engaging in various enterprises he formed a partnership with his brother Alfred and organized the Birnie Paper Company. This first had quarters in the Birnie block; but when that block was destroyed by fire in 1892 a new factory building was erected in Brightwood. In 1905 the business was incorporated. His brother Alfred was general manager and treasurer until his death. Mr. Birnie was also prominent in Masonic circles and was a 32d degree Mason, a Noble of Melha Temple and member of Roswell Lee lodge of Masons. He leaves a daughter, Mary Louise, and a son, Dr. John Birnie.

Trade Notes From the Northwest

[FROM OUR REGULAR CORRESPONDENT]

PORTLAND, Ore., October 17, 1925.—T. F. Doan, Bellingham, Wash., is preparing plans for constructing superstructure of a building for the Pacific Coast Paper Mills company at a cost of $75,000.

The Fidalgo Pulp and Manufacturing Company, Anacortes, Wn., has doubled its capitalization to $252,500.

Mr. and Mrs. A. S. Brooks are touring the Pacific coast by automobile. Mr. Brooks has extensive holdings with the Powell River Paper Mills in British Columbia.

The Portland Box and Label Company, Milwaukie, Oregon, has increased its force and extended its market territory into Canada and Mexico. This plant manufacturers druggists pill and powder boxes and lines of gummed labels.

Paper Men Win Legion Rifle Contest

At the National American Legion pistol and rifle championship matches, held recently at Ashland, Neb., in connection with the American Legion Convention at Omaha, Neb., Post No. 33, of Neenah, Wis., won the contest in brilliant style.

The Neenah Legion Post is widely known as the "Paper Makers' Post," and the trip to the convention was made possible largely through the contributions of Neenah and Menasha paper manufacturers.

The team consisted of six men, including Lyall Stilp, assistant purchasing agent of the Kimberly-Clark Company, of Neenah, and Frank J. Schneller, sales manager of the Gilbert Paper Company, of Menasha.

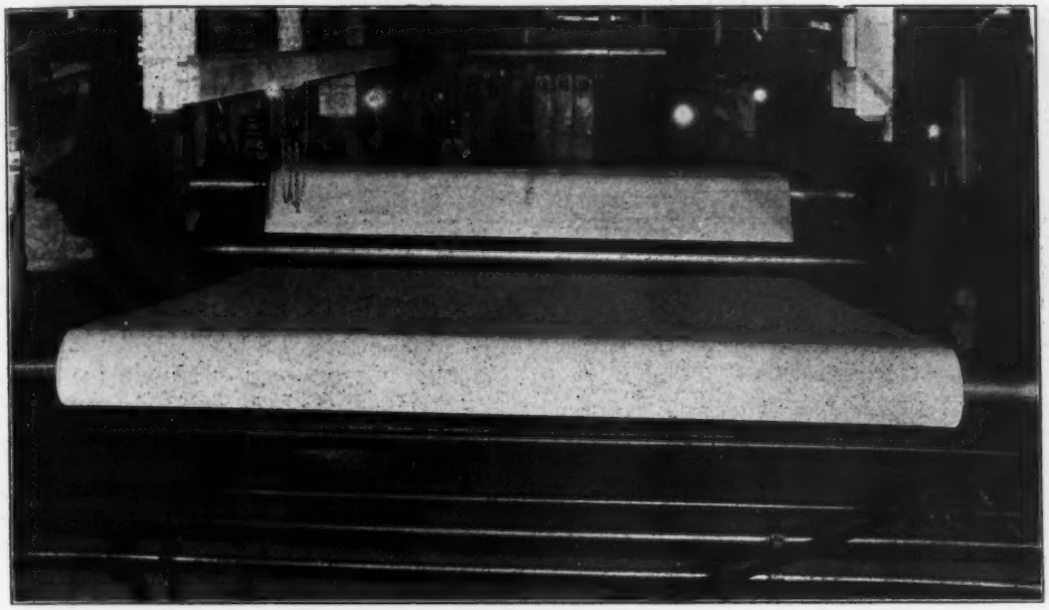
Mr. Schneller shot first in both pistol (.45 colt), and rifle (Springfield 30-30, U. S. A. issue). Mr. Stilp shot third in the rifle contest.

Paraffine Companies Build Big Box Plant

[FROM OUR REGULAR CORRESPONDENT]

LOS ANGELES, Cal., October 19, 1925.—In keeping with the rapid growth of Los Angeles and Southern California, the Paraffine Companies, Inc., has completed the construction of a huge factory at Vernon and Santa Fe avenues for the manufacture of corrugated and solid fiber shipping cases, folding boxes, set-up boxes and advertising displays.

Adjoining the new plant is the Southern Board Mills, making paper board used in the converting plant. The executive and sales offices are now combined in the new office building located on the factory grounds.



Make the Acquaintance of the Hamilton A Plate Press Felt!

You will recognize Hamilton felts by two blue lines running the full width of the felt with one shorter blue line between them.

THE demand for Hamilton A Plate Press Felts continues to grow. It is a bigger part of our output this year than it was last. This is a fine felt—the best we know how to make regardless of price.

No felt used in America today is serving satisfactorily, more purposes, or is being used in more mills. Its versatility gives it a wide market—its quality builds an ever increasing demand.

It is used for bond, book, writing, ledger, glassine paper and also for certain board finishes. The finish it produces is without a rival—and it wears longer than you would expect any felt to wear.

The A Plate Press Felt is our masterpiece after generations of felt making, and the concentration of great resources in money, men and equipment on the problem.

If you have never used it, you are missing something. We like to sell it, for it always makes a friend.

There is Hamilton felt to meet every requirement of the paper maker. Hamilton service men know paper making and they know felts. They can lay their fingers on the source of felt troubles. Their advice is free to any mill, whether Hamilton felts are used there or not.

SHULER & BENNINGHOFEN **Hamilton, Ohio**

THE MIAMI WOOLEN MILLS **FOUNDED 1858**

Hamilton Felts

CONSTRUCTION NEWS

A Summary of Vital Facts Regarding Construction, Finances and Operation of Paper Mills

Construction News

Toledo, Ohio—The Butler Paper Products Company will soon take bids for the erection of a new two-story and basement plant, 30 x 100 feet, at Funston and Sylvania Avenues, to be used primarily for storage and distributing service, estimated to cost $30,000. Mills, Rhines, Bellman & Nordhoff, Ohio Building, are architects. S. E. Butler is president.

South Hadley, Mass.—The American Tissue Paper Company has taken bids on a general contract for a new one-story addition to its mill, to be 50 x 105 feet, estimated to cost $50,000. Howes & Howes, 199 High street, Holyoke, Mass., are architects.

St. Helens, Ore.—The St. Helens Pulp and Paper Company has completed plans and will begin the construction of its proposed local mill. It will consist of a number of units with power house, machine shop and miscellaneous structures, estimated to cost close to $1,000,000, with machinery. Willard P. Hawley, Jr., head of the Hawley Pulp & Paper Company, Oregon City, Ore., is vice-president of the company.

West Sacramento, Cal.—The United States Fiber Products Company, Woodland, Cal., is said to have concluded negotiations for the purchase of a tract of property on the Sacramento River, near West Sacramento, as a site for a new storage, loading and shipping plant. The project will include a wharf and mechanical handling equipment.

Syracuse, N. Y.—The Jordan Paper Box Company, 242 South Salina street, has completed plans for extensions and improvements in its two and three-story plant to provide for considerable increase in output. La Vaute & Mulranen, Herald Building, are architects. C. L. Jordan is president.

Milford, Conn.—The New England Corrugated Box Company, Inc., recently organized, has leased space in a local building, totaling about 20,000 square feet of floor space, and will operate a plant for the manufacture of corrugated paper boxes and containers, including corrugated board shipping cases. At a later date, the company purposes to establish a complete individual factory unit in this section, with considerable increase in output.

Orlando, Fla.—S. Kendrick Guernsey, 721 West Robinson avenue, is at the head of a project to establish and operate a local plant for the manufacture of rough wrapping papers and kindred stock, using waste paper for conversion. Estimates of cost will soon be made. Inquiries are out for suitable machinery and equipment.

Cleveland, Ohio—New interests have acquired the plant and property of the Cleveland Paper Manufacturing Company, 1640 Superior avenue, N. E., headed by A. H. Seyler and J. H. Walsh. The company has been reorganized and plans are under way for general expansion. It is understood that the present capacity will be increased. Mr. Seyler, formerly connected with the Alling & Corey Company, Pittsburgh, Pa., will be president of the new company, and Mr. Walsh, with the Cleveland organization for a number of years past, will continue as vice-president. J. F. Peacock is secretary and treasurer.

St. Paul Park, Minn.—The International Hemp Fiber Company, Newport, Minn., Joseph Frank, head, care of the Farmers' Terminal State Bank, Newport, is considering plans for the erection of a new local mill for fiber products manufacture, to be two-story, reported to cost about $50,000, with machinery.

Cincinnati, Ohio—The Bishopric Manufacturing Company, Spring Grove avenue, manufacturer of wallboard products, has plans for the construction of a new one-story plant at Spring Grove and Estes avenues, estimated to cost $20,000. B. C. DeCamp, Gerke Building, is architect.

Cincinnati, Ohio—The Sabin Robbins Paper Company, Middletown, Ohio, has awarded a general contract to R. J. Stevens, First National Bank Building, Middletown, for the construction of an addition to its plant at Spring and Ludlow avenues, Cincinnati. The work will include alterations and improvements in the present building, and is estimated to cost approximately $60,000.

Laurel, Miss.—The proposed new plant of the Mason Fiber Company, Laurel, will consist of a number of units, with machine shop, power station and auxiliary structures, estimated to cost in excess of $750,000, instead of a smaller amount, previously noted. A list of machinery to be installed will be arranged at an early date.

Easton, Pa.—The Individual Drinking Cup Company, manufacturer of paper cups, etc., has completed plans and will proceed with the erection of a new plant on local site, estimated to cost approximately $65,000, with equipment. A general contract has been awarded to the R. T. & C. D. Stewart Construction Company, Easton.

Chicoutimi, Que.—The Chicoutimi Pulp Company is reported to be planning for the construction of a new plant unit in this section, to approximate in excess of $1,000,000. The company is operated by the Quebec Pulp Company, having been lately acquired for consolidation and expansion purposes.

New Companies

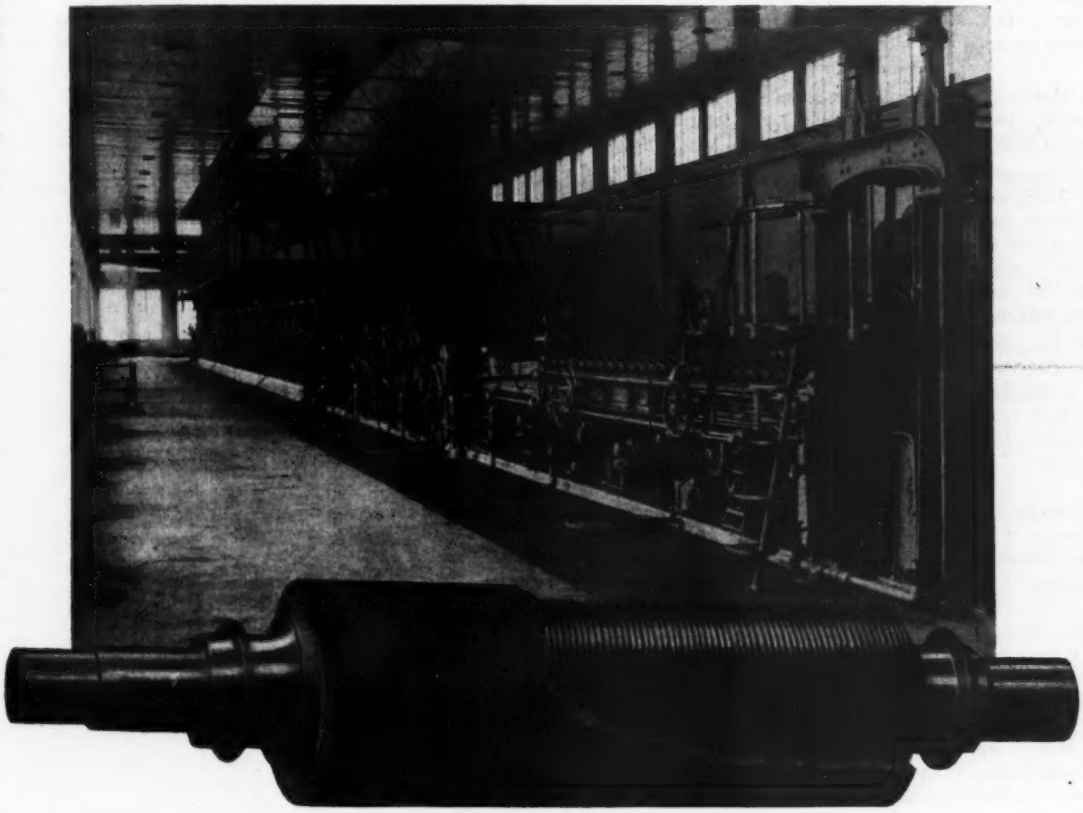
Chicago, Ill.—The New Process Products Company, 410 North Michigan avenue, has been incorporated with a capital of $81,000, to manufacture and deal in paper goods. The incorporators are Henry G. Ross, Fred Barth and Gerald E. Welsh.

New York, N. Y.—The Paragon Paper Company has been incorporated with a capital of $10,000, to deal in paper products. The incorporators are J. and E. Kuris, and S. Davidson. The company is represented by A. P. Bershon, 25 West Forty-third street, New York.

Pamona, Cal.—The Valley Box Company has been incorporated with a capital of $75,000, to manufacture paper boxes and containers. The incorporators are C. E. Taylor, W. F. McConnell, and C. E. McConnell. The company is represented by Youngahl & Nichols, 1227 Rives-Strong Building, Los Angeles, Cal.

Chicago, Ill.—The Fried & Bell Paper Company, Inc., 2247 West Division street, has been incorporated with a capital of $75,000, to manufacture and deal in paper goods. The incorporators are Harry Malkin and H. Savodkin.

(Continued on page 44)



The heart of the paper machine

The press rolls and couch rolls of a paper machine are the heart of the mill itself. Too much depends upon them to permit any off-hand selection of them or any unnecessary experimentation. Particularly is this true of rubber coverings.

The United States Rubber Company has long held an enviable reputation for its excellent service to users of rubber covered rolls. Our rolls are manufactured with the utmost care and skill, each being especially made to meet the exact conditions under which it is to operate. After they are once in use, we stand ready to furnish any reasonable service to insure the user's complete satisfaction.

We make a specialty of rubber covered felt carrying rolls, worm rolls, wringer rolls and breast rolls.

United States Rubber Company

1790 Broadway **New York City**

Branches in every industrial center

Trade US Mark

New York Trade Jottings

On his farm at Manchester, Vt., Frank C. Overton, of Castle and Overton, Inc., 200 Fifth Avenue, New York, is enjoying a well-earned vacation this month.

* * *

F. T. Harris, of the executive staff of the International Paper company has been appointed editor of the *International Paper Monthly*, to succeed A. G. Sclater, resigned.

* * *

Frank Jones, of the Canada Cement Company, of Montreal, who is well-known in the paper industry, was a prominent visitor to New York this week.

* * *

Angus McLean, president and general manager of the Bathurst Company, Ltd., of Bathurst, N. B., visited many of his friends in the New York paper trade early this week.

* * *

Max B. Fisher, president of the Fisher Brothers Paper Company, of Fort Wayne, Indiana, while on an automobile trip through the east, stopped over in New York and called on his many friends in the trade.

* * *

Dean K. Chadbourne has been appointed general manager of the Westinghouse Electric International Company to succeed E. D. Kilburn, who was recently elected Vice-President of the domestic Westinghouse Company.

* * *

Bulkley, Dunton & Co., importers of pulp and specialties in Excelsior Felts for every grade of pulp and paper, of 75-77 Duane Street, New York, have taken over the business of the Hartig Pulp Company, of 247 Park Avenue.

* * *

J. V. McNamara and J. P. Parsons were recently appointed assistant sales managers by the International Paper Company. Mr. McNamara has been with the company for more than fifteen years, while Mr. Parsons joined the sales department two years ago.

* * *

The Fall meeting of the News Print Service Bureau was held at the Hotel Commodore yesterday. After a luncheon in the Tavern Room of the Hotel Commodore, an interesting discussion of economic and business conditions in America and Europe took place.

* * *

The Baldwin Paper Mills, Inc., have removed their offices to 61 Greene Street, New York, where the combined facilities of offices and warehouse will enable them to serve their customers more advantageously. The new telephone numbers are Canal, 3803, 3804 and 3805.

* * *

The Baxter-Lane Paper Corporation, of 90 West Broadway, New York, announces the opening of a branch office at Petersburg, Virginia, in charge of T. F. Heath. Mr. Heath is a Virginian and is thoroughly familiar with the textile trade of the South, in which trade the Baxter-Lane Paper Corporation specilizes.

* * *

R. S. Kellogg, secretary of the News Print Service Bureau, with offices at 342 Madison Avenue, New York, spent a busy time in Chicago last week. On Monday he addressed the local group of the Salesmen's Association on "The Consumption of Basic Commodities in the United States, and on Tuesday he spoke before the Inland Daily Press Association on "Some Factors Which Affect Newspaper Circulation". He was accompanied on the trip by Mrs. Kellogg.

* * *

William A. Gately, of the Simplified Practice Division of the Department of Commerce, will probably talk to the Paper Board Industries Association at its meeting at the Waldorf-Astoria, New York City, on November 17. Mr. Gately will take up the box board simplification program and discuss the publication of a blue book in this connection. Mr. Gately reports that replies to the questionnaire on binder board have been received from about 95 per cent of the production of the country. It is understood that he will present the tabulation of the questionnaire at an early meeting of the Binder Board Association.

* * *

The Texas Gulf Sulphur Company for the quarter ended September 30, 1925, reports net earnings of $1,478,846 after expenses and reserves for depreciation against net earnings of $1,140,219 in the same quarter last year. The net earnings for the September quarter were equal to $2.32 a share on the $6,350,000 capital stock of $10 a share par value outstanding, against $2.01 a share earned in the previous quarter and $1.79 in the same quarter last year. For the first nine months of 1925, net earnings were $4,174,223, after expenses and reserves for depreciation and taxes, against $3,477,860 in the same period in 1924. The net for the first nine months of 1925, was equal to $6.57 a share earned on the capital stock against $5.47 in the first nine months of last year.

* * *

At the annual general meeting of the Supply and Equipment Association, Inc., of the American Paper and Pulp Industry, held in the Old Colony Club, at the Waldorf Astoria Hotel, New York, last Thursday, the following directors were elected for the ensuing year: H. C. Barbour, International Pulp Stone Co.; A. D. Weissenborn, Appleton Wire Works; J. A. Cameron, Cameron Machine Company; W. W. Cronkhite, General Electric Company; P. Dennett, Bird Machine Company; J. G. McGerry, Vacuum Oil Company; F. C. Huyck, F. C. Huyck and Sons; E. Merz, Heller and Merz Company; C. H. Nealley, Eastwood Wire Manufacturing, Company; E. A. Peterson, Valley Iron Works; J. V. Santry, Combustion Engineering Corporation and W. N. Wilkinson, Union Sulphur Company. Informative addresses were given by Norman W. Wilson, president of the American Paper and Pulp Association; Charles A. Gordon, vice-president of the Oxford Paper Company and Dr. Hugh P. Baker, secretary of the American Pulp and Paper Association. Officers for the forthcoming year will be elected at the December directors meeting.

Bids for Government Paper

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., October 21, 1925.—The Government Printing Office, has received bids as follows for 25 reams White Railroad Board, 22 x 28, .048 print. R. P. Andrews Paper Company, $74.80 per thousand sheets; Barton, Duer & Kotch Paper Company, $81.80; Mathers-Lamm Paper Company, $74.95; Carter, Rice & Co., Corp., $84.75; Old Dominion Paper Company, $76.48; Holyoke Card and Paper Company, $72.50; Reese & Reese, $74.75; Lindemeyr & Harker, $73.40; Dobler & Mudge, $74.00; Stanford Paper Company, $77.25; and Maurice O'Meara Company, $80.00.

Construction News

New York, N. Y.—The Favorite Paper Box Company has been incorporated with a capital of $40,000, to manufacture paper boxes and containers. The incorporators are F. Davis, A. R. Zeitchick and H. Saltanoff. The company is represented by Burnstine & Geist, 276 Fifth avenue, New York.

New York, N. Y.—The Claremont Paper Box Company has been incorporated with a capital of $10,000, to manufacture paper containers of various kinds. The incorporators are R. L. Marcus, A. McLaughlin and R. Weinreb. The company is represented by Marcus Rosenthal, 645 Tremont avenue, New York.

Chicago, Ill.—The Northwestern Paper & Bag Company, 322 West Chicago avenue, has been incorporated with a capital of $15,000, to manufacture and deal in paper products. The incorporators are Harry Stamatakos and Louis Kokoris.

Announcement

Hy-G Paper Napkins and Dispensers offer the solution to the unsanitary and wasteful use of paper napkins.

Hy-G Products are in a class by themselves.

The ECONOMY of HY-G PRODUCTS counteracts the lowest priced paper napkins, which in every shape or fold in the crude manner they are served, are always *wasteful* to the extent of 50%.

Over seventy distributors throughout the country command ever increasing sales and handsome profits on Hy-G Products because of their exceptional merits.

Hy-G Products sell at sight whenever and wherever introduced to paper napkin consumers.

Exclusive Distribution Only.
Details on request.

HY-G PRODUCTS

"Won By One Never Loose"
Saves 50% Waste
Plus Highest Quality

Independent Paper Mills, Inc.

Patentees—Manufacturers
Brooklyn, N. Y.
U. S. A.

[*The methods of folds, manufacturing, dispensing, together with trade marks, are patented and registered in the United States, Canada, Great Britain, France and Germany.* Infringements will be rigidly prosecuted.]

PAPER TRADE JOURNAL
ESTABLISHED 1872
With Which Is Combined
PAPER
The Magazine of the Paper Industry
HENRY J. BERGER, Editor

Member A. B. C. Audit Bureau of Circulations

Vol. LXXXI New York, October 22, 1925 No. 17

VOCATIONAL EDUCATION

Speaking recently before one of the Divisional meetings of the American Pulp and Paper Mill Superintendents Association on "Vocational Education." Mr. T. L. Crossley, a member of the Joint Committee on Vocational Education in the Paper Industry, divided the great objects of human endeavor into Religion, Education and Bread. If we place them in that order of importance we are progressing rightly, but if we reverse the order, we are slated for trouble. If a man is compelled to live for bread alone he is little more than an animal. This is seldom literally the case in America but by force of circumstances many men, well endowed mentally, have to struggle for material existence.

Forests and men constitute the future great sources of raw material not only in the paper industry, but in many industries. It is difficult, however, to bring this to the public view with sufficient force.

Boilers, motors and paper machines are being operated at over one hundred per cent of their rated capacity, while men are operating at less than ten per cent. How can we increase the output? By proper attention to Religion and Education. If you show a man how to shovel more coal in less time with less fatigue, both he and his employer are gainers. That is an example of vocational training, It enables a man to hold his job longer and with more satisfaction, but it does not qualify him for advancement. Some men can go no further. If in addition to that you can show him by physics and chemistry how coal in burning produces energy and how that energy makes paper for example, he is getting technical education. Vocational training and technical education are sometimes confused, but technical education goes further. It fits a man for advancement.

There is a parallel between religion and industry in that the leaders of both tend to become static, to perpetuate processes of thought beyond their period of contribution to progress. Mental sclerosis sets in, and there is high blood pressure when new ideas are mooted. This state of mind is shown in the employer by obstinate persistence in old methods and by the employee in the fear of reduced earning capacity. Many a man has spent his whole life industrially in the operation of one machine. Imagine his predicament if that machine becomes obsolete and he knows nothing of the principles of mechanics on which its successor is constructed. He is in a worse position than a raw school boy just entering the plant. His lifework is gone.

Up to 1885 the raw materials for paper were rags and straw. Wood has since supplanted them—a new material with no traditions, but great possibilities. Paper became cheaper, machines were speeded up—everything was, as old Pat said, except the wages and the clock. An apprenticeship was gone,—rest its soul. It had served a useful purpose and will no doubt have a new and more useful reincarnation.

You cannot teach a man to make paper from a book, nor can you make angel cakes from books, but the good cook saves herself much time and many eggs by getting from books the results of other cooks' work, and the papermaker can apply the experiences of Archimedes, Euclid, Newton, Faraday, Edison and hundreds of others in all fields of science as well as the most advanced workers in his own field by applying what he can get from books to his own problems. If men could not do so we would be much in the position of the mule who, it is aptly said, has no pride of race or hope of posterity.

There are two ways of carrying on educational work in paper mills. Class work received the first attention of the committees of the two technical organizations of the paper industry that were formed in 1915, and much endeavor has been given that time honored and always useful method. There are in most mills great difficulties in the way of maintaining classes, the small number of interested men, the different shift arrangements, the varied requirements and prior educational attainments, the wide range of mental capacity and age, the lack of qualified teachers and other general or local obstacles. After working for some years these two committees met and formed this joint committee, primarily to get out a set of books that would be suitable for class or correspondence study. The outcome has been the formation of several schools, operating in different ways, but it is now safe to say that no ambitious man in paper industry need be without a good education in the principles of science as applied to paper or pulp so long as he has a backbone and a postoffice and knows how to read and write English.

It has been found that men with only common school education have been able to pass the examinations in all the forty-five sections of the five volumes of the text books in two years. This can not be done in all cases, nor is it entirely desirable, but it is a matter of gratification to the men who have worked on these books to know that they are not beyond the ability of the common school man, while they are also spoken of with appreciation by men who have taken courses in our greatest science schools.

Mr. Crossley has had the privilege of visiting a large number of mills in connection with the work of the Institute of Industrial Arts of Gardenvale, Quebec, Canada, which was formed to develop a correspondence school based on these text books and to be entirely under the control of the industry, and feels that it is safe to say that it is of the utmost importance to make it possible for the right kind of employee to take these courses or to attend classes where they are carried on. There is no hesitation in advocating these courses, because they are practical, cover the ground and do not exploit the men.

EMPLOYMENT IN THE PAPER INDUSTRY

A continued decrease in employment in the pulp and paper industry for August is shown in figures just made public by the Bureau of Labor statistics of the U. S. Department of Labor.

Replies were received from 201 paper and pulp mills, which report their employment in July at 53,431, decreasing in August to 53,072, a decrease of 0.7 per cent. The payrolls in these plants, on the other hand, increased from $1,351,556 in July to $1,371,603 in August, an increase of 1.5 per cent.

One hundred ninety-nine paper and pulp plants reported their employment in August of last year at 50,945 increasing in the same month of this year to 52,527, an increase of 3.1 per cent. The payrolls in these plants also increased from $1,309,711 in August of last year to $1,358,718 in the same month of this year, an increase of 3.8 per cent.

Replies were received from 152 paper box factories which reported their employment in July at 15,998, increasing in August to 16,108, an increase of 0.7 per cent. The payrolls in these plants also increased from $344,589 in July to $352,911 in August, an increase of 2.4 per cent.

One hundred forty-two paper box plants reported their employment in August of last year at 15,381, decreasing in the same month of this year to 15,352, a decrease of 0.2 per cent. The payrolls in these plants, on the other hand, increased from $321,547 in August of last year to $333,483 in the same month of this year, an increase of 3.7 per cent.

International Plans New Capital Stock Issue

The International Paper Company has announced its intention to sell additional common stock to shareholders on a share for share basis. Details of the plan were disclosed in President A. R. Graustein's letter to the stockholders calling a special meeting for November 6 at Corinth, N. Y., to approve the plan to change the present $100 par common stock to no par value and to offer to present stockholders new common stock on a share for share basis, at $50 a share, the number of authorized common shares to be increased from 500,000 to 750,000, and the number of authorized 7 per cent preferred shares from 500,000 to 750,000.

The new financing is mainly to provide funds for construction work on the company's mills in Canada. The expansion of the company's productive capacity in Canada, it is explained, is due to the fact that the production cost of newsprint in the Canadian mills is about $10 a ton less than in American mills. Four additional machines are being put into the Company's Three Rivers mill at a cost of about $8,500,000, which is being partly met from the company's recent bond issue, partly from current earnings and partly from reduction of inventories.

The company also is planning to develop the recently acquired Riordan-Gatineau properties to a capacity of 400 or 500 tons of newsprint a day. It is estimated that $15,000,000 will be necessary for this development.

In addition to these expansions, the company has subscribed to $4,000,000 worth of stock to the New England Power System, which is now in process of reorganization and in which the Power Corporation of New York, Stone & Webster and other power companies will participate.

The company also plans to develop some of the hydro-electric sites it owns in this country, to convert some of its newsprint mills to other purposes, such as already has been done at the company's mill at Niagara Falls, and further to develop the production of sulphite pulp and its sale to rayon manufacturers.

In the consolidated balance sheet as of August 31, 1925, issued with the letter, the company shows total assets of $139,354,944, to which plants and properties contribute $71,029,896; woodlands, $18,241,536; stocks and bonds of the company and subsidiaries and other securities, $11,947,110, and current assets, $32,847,166. Current liabilities are listed at $5,160,456, and reserves at $10,203,094.

Fort Frances Co. Asks Permission For Dam

[FROM OUR REGULAR CORRESPONDENT]

INTERNATIONAL FALLS, Minn., October 19, 1925.—Members of the International Joint Commission have completed hearings here on the application of the Fort Frances Pulp and Paper Company for permission to construct dams and raise levels of certain boundary lakes.

The commissioners decided that the entire water power project, one of the largest ever proposed affecting boundary waters, will be placed in the hands of United States engineers for study and that no decision on the application will be made until the engineers complete their report.

Plans for the international waterpower project in the chain of lakes on the border between Minnesota and Ontario were placed before the commissioners at the hearing. The formal application of the Fort Frances Pulp and Paper Company asked "the right to dam outlets of several lakes along the international waters above Rainy Lake, for the control of waters flowing into Namakan Lake, as well as, in cases where power is available, the right to develop such power and erect power plants."

E. W. Backus of Minneapolis, representing the Fort Frances Pulp and Paper Company, told members of the commission that the water power project would benefit public and private interests. He asserted that paper and pulp manufacturers would be benefited through the increase in hydraulic and hydroelectric power, that navigation would be safer and of greater value to the territory, and that lumber and logging operations would be served better by uniform lake elevations. The larger controlled areas of water would be a benefit to fishing by providing better breeding conditions, he contended. He expressed the belief that the larger and more uniform lake areas would contribute to industrial development of this locality, bring added prosperity to agricultural interests through enlarged local markets, increase inbound and outbound railroad tonnage, and stimulate the employment of labor in the Rainy Lake region.

Many of those who testified in opposition to the application declared that the rising of the level of the lakes and rivers would destroy the natural beauty of the district.

Allied Paper Mills Acquire Wolverine Plant

[FROM OUR REGULAR CORRESPONDENT]

KALAMAZOO, Mich., October 19, 1925.—The Allied Paper Mills have acquired the plant of the Wolverine Paper Company in Otsego and will operate it for a period of six months under a special agreement concluded with the bond holders, according to A. G. Gilman, president of the first named concern.

The Wolverine plant was recently sold to the bond holders for $60,000 as result of a receivership sale. For several years it has operated at a loss, being unable to compete with the more modern type of wax paper mills. It is so situated since the recent sale that its facilities can be used to advantage by the Allied Paper Mills.

In taking it over, President Gilman says the product of the Wolverine plant can easily be taken over by the Allied coating mill in Otsego and it is very likely the output of the Wolverine will be coated raw stock from this time forward.

"We will do away with the wax paper division entirely," said Mr. Gilman. "That is a line foreign to our line of business."

The Wolverine mill is in excellent physical condition, having been kept up to a high point of efficiency. It is equipped with one 96 inch Fourdrinier and one 88 inch single cylinder. The former machine is rated at 20,000 pounds a day, while the cylinder will turn out 7,000 pounds of tissue every 24 hours. There are ten 1,000 beaters and three jordan engines.

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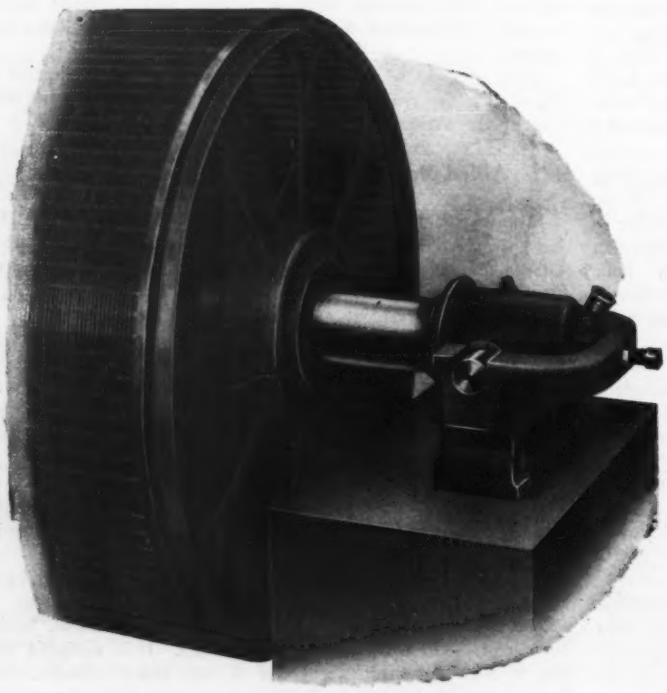

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Section of the
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Conducted by W.G.MacNAUGHTON, Secretary

Electrical Maintenance in Pulp and Paper Mills

By W. W. Cronkhite, General Electric Co.

It has been a hobby of mine for some time to interest Pulp and Paper Mill Managers and Superintendents in some systematic record of the care and maintenance of their electrical equipment. This summer while visiting at the St. Croix Paper Company, Woodland, Maine, I was agreeably surprised to find that Mr. H. L. Hayes, Electrical Engineer of the Paper Company, had put into effect a splendid system which will appeal to all of you because it is not an elaborate or complicated system, costs very little to install, yet it gives the Engineer and the Manager of the mill all the information he wants to know. A similar system could be put in by you at little or no expense.

As the St. Croix system was working so nicely, I took the opportunity to discuss it with Mr. Hayes in some detail and most of this article is based on that system. Therefore, I take this opportunity to give the St. Croix Paper Company and Mr. Hayes credit for the ideas incorporated in this paper.

Work May Be Carried to Extremes

Maintenance work in a paper mill can be carried to extremes and made unduly expensive and yet not accomplish the desired results. Properly balanced, systematic maintenance is, therefore, necessary to obtain the desired economies.

The first requirement of systematic maintenance is the keeping of proper records. Officials of some of the smaller mills may scoff at records as being unnecessary and unduly expensive. All paper mills that are electrified wholly or in part should and do need certain maintenance information and some record should be kept in order to get continuity of service. It stands to reason that a larger mill with several hundred thousands of dollars invested in electrical equipment will keep a more elaborate record than a smaller mill which is only partially electrified. It may be that in a smaller mill only a part of the time of one man would be required, whereas in a larger mill the entire time of two or more men might be required.

There is a great difference in opinion as to what information should be kept and the manner of keeping it and there may be in some mills, a tendency to keep too much data on one form.

Popular Form of Record

The popular, and we believe efficient, form of record is to have two cards for each piece of apparatus. Let us consider a motor for instance, the first card which could be called a "Specification" card should be made out when the motor is first purchased and delivered, containing information such as the following:

The number of the motor as assigned by the paper mill.

The date and where purchased, with the purchase price if possible.

Where and the date when the motor was first installed.

Complete nameplate rating including serial number or model number of the motor.

Efficiency, power factor and heating guarantees.

Winding data, as coil specifications, connections, number of coils, etc.

Mechanical data such as bearings, oil gauges, oil rings, shaft sizes, etc.

Miscellaneous data for brushes, collector rings, and a space for general remarks.

A second card called "Maintenance and Service" card can be made out. On this card would be recorded from time to time the maintenance on this motor and any other information that is required by the Electrical Engineer or the Manager of the mill.

Good maintenance work requires that parts should be stocked which are subject to wear or deterioration. Therefore, when a new piece of apparatus is purchased it seems quite essential that those interested should determine with a great deal of care what spare parts should be purchased for this particular piece of apparatus. Spare bearings are, of course, a necessity, but in ordering bearings it should be borne in mind that many motors have duplicate bearings and this information will appear on the "Specification" card if it is kept properly. A slow speed motor of a certain size may take the same bearing as a high speed motor with several times the horsepower rating. Of course, there is another condition that has to be noted on the "Specification" card, namely that of ten times bearings of different motors are of the same nominal size but not interchangeable due to different minor metals. It is, therefore, necessary to have specific information about each part that it is desired to stock.

Spare Windings and Motors Necessary

Spare windings and spare motors seem to be a necessity for continued operation. Sometimes a spare winding is preferable to a spare motor, particularly if the latter happens to be special or if there is only one of that particular type and speed used in the mill. Another deciding factor is the duty of the particular motor in question. Possibly that particular motor can be shut down for sufficient time to permit rewinding but could not remain

* Presented at meeting of Canadian Pulp and Paper Men, sponsored by Canadian General Electric Co. at King Edward Hotel, Toronto, Ont., October 12-13, 1925.

down long enough to get a new winding from the factory. Under such conditions a spare winding would require less investment than a spare motor and is probably as effective.

On the other hand if the motor is required for continuous operation, a spare winding would be useless because the duty would not allow a shut down of twenty-four hours for the rewinding job to be done. Under such conditions spare motors must be provided. These details should be considered by the maintenance man in ordering spare parts and this information should be shown on the card.

If there are very many belt drives in the mill, spare motors are desirable because even if the spare is not of the same size and speed it can generally be used temporarily.

It is up to the maintenance man to decide the choice between windings and a spare motor. Each case should be studied and an estimate made of the effect of a breakdown and a plan made accordingly. In estimating the cost of a breakdown do not forget that in a paper mill there is a sequence of operation so that often times even a small breakdown may cause a great loss in production and, in such a case, the need of a spare equipment, that can be readily put into service, is obvious and essential.

It is well to bear in mind that a maintenance man's particular job is to avoid expense and breakdown rather than to make a world's record in getting the equipment back into service. A good maintenance crew will avoid the making of extensive repairs and save for the company thousands of dollars annually.

Power Tests Important

From time to time it is important to make a power test on motors. Therefore, the efficiency and power factor guarantees are essential information to have on the cards. There is no economy in running motors underloaded for in many cases the insulation deteriorates almost as fast with low temperature as it does with the temperature at which the motor is supposed to operate. Again, underloaded motors are a loss because of lower efficiency and lower power factor and probably through increased investment. There are many more motors in the paper mill industry running underloaded than there are running overloaded.

Power measuring instruments seem to be almost a necessity for proper maintenance. A complete set of instruments will pay for themselves in a short time by correcting the loads on motors. All motors in a mill should be tested from time to time as to load and an indication made on the card for often times it will be found that a 100 h.p. motor is carrying a 75 h.p. load and then there may be need for a 100 h.p. motor for certain work and an exchange of motors about the plant can be made with advantage. A 75 h.p. motor can be purchased and substituted for the 100 h.p. motor, not an uncommon occurrence because we know that there is a tendency to buy oversize motors rather than undersize.

Continuous Operation Most Important

High efficiency is desirable, of course, but continuity of operation is of supreme importance and never should be sacrificed for the sake of increasing slightly the efficient operation of the motor. It is well to bear in mind that when a motor is down, its efficiency is zero and it takes only a few breakdowns during a year to offset any saving by increased efficiency. This is just a warning that the operation of the motors must be watched from time to time, especially where a motor is being shifted around in the mill doing odd jobs. Overload settings should be watched very carefully. There is a tendency on the part of the motor man to change these settings from time to time without the knowledge of the Electrical Engineer, and they should be checked by the maintenance crew from time to time.

The operating temperature of the motors is something that should be checked. For constant load, the motors may be loaded up to the guaranteed operating temperature. With variable load temperature is not so easy to control.

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A pump motor might have a normal load of 75 h.p. but, for a short time each day, it might by taking 100 h.p. The overload relays in this case would have to be set to take care of the maximum load and if the setting of the overload is left to the pump man a burned out motor may be the result.

If the "Maintenance Cards" show the power factor and efficiency of each motor, it may be found that it is more economical to operate a larger motor at say three-quarters load than a smaller motor at full load for frequently the efficiency curve will show that the larger motor is more efficient at part load than the smaller motor at full load: It is in cases like this that the card record will effect economies from time to time.

Importance of Standardization

Of course it hardly seems necessary to dwell upon the importance of standardization, but there are many industrial plants today being operated with motors made by half a dozen different manufacturers. This policy necessitates, of course, the carrying of many extra parts of spare equipment.

It is rather difficult to make definite recommendations or to offer a definite program because the success of a maintenance scheme depends greatly on the men who are actually doing the work but it is well to have on each shift a man whose duty it is to make periodic trips around to all the motors and making these men responsible for things that happen. In other words, their inspection should be such that they function to prevent trouble and shutdowns. This inspection would probably consist, among other things, of inspecting bearings to see if they were properly lubricated; the setting of the overloads to see if they had been changed by some irresponsible person; inspection of the contact fingers and the like for many motors are shut down due to trouble in the control devices.

Causes of Motor Burnouts

The three principal causes of motor burnouts or shutdowns are probably due to defective insulation, bearings burning out permitting the rotor to rub on the stator, overloads and low voltage.

A well-built motor with ordinary care and attention should last for twenty years and most of its troubles will be found to be due to outside sources.

In many locations in a paper mill, it seems to be almost impossible to keep motor windings clean. By clean, we do not mean ordinary dust as this in no way enters the windings unless it becomes so thick that it plugs the air ducts, reduces the air circulation and causes overheating. Oil probably is the cause for more breakdowns of insulation than any other cause, although dirty water and acid are, of course, undesirable.

The inspection crew should watch these points. Oil may come from the motor bearings or it may be thrown into the motor from belts, chains or gears. Water pipes should be watched for leaks for the leak may not be dripping directly on the motor but may be spattering on it from some other surface.

Blowing out with compressed air will do much to lengthen the life of motor windings but, of course, it is not entirely sufficient because periodically, motors should be painted with a good insulating varnish, using an air gun with 20 to 25 lbs. pressure. How often this should be done depends upon the location of the motor and the character of its service. Probably once a year or once in two years will be sufficient in the majority of cases.

After a few years in operation, the varnish on the windings will become "checked" and minute veins appear. When the motor is shut down moisture accumulates and when the motor is started up and heats, this moisture is sucked into the insulation. Periodic painting will keep these minute cracks filled up and will add many years to the life of the motors.

Many mills make it a parctice to take motors apart about every five years but this all depends upon the service and location of

the motors. There will be little or no trouble with motor bearings if they are kept properly filled with oil and kept free from grit. Most bearing troubles will come from outside sources such as overtight belts, endplay of shafting or pump rotors. From time to time millwrights, of course, will take up a belt and the motormen should be notified in all such cases so that they can watch the motor operation under the new conditions and see that the bearings are not heating unduly. Bearing oil had best be changed at least once a year.

Overloads From Outside Sources

Overloads on motors most generally come from outside sources and properly maintained overload protection will take care of this condition. It is for this reason that the motormen are expected to check up frequently the operation of the overload relays. There is a tendency about a paper mill when a motor is overloaded and blows a fuse or trips the overload relay to adjust the overload protection a little bit higher. This should only be done in an emergency and under special conditions and under the supervision of the maintenance man and if this condition continues to exist there is no justification in taking the chance of burning out the motor but the proper size of motors should be installed.

The "Maintenance Card" on each motor or piece of apparatus will give a complete story of the installation and will show the expense incurred. It will also give a check on how efficient the repair men are. Often times the motormen, in inspecting a motor or starter will fix up the job in a hurried manner and in a short time the same piece of apparatus will be giving trouble again. A card system or chart of motor and starter inspection if properly carried out will show this condition and provides a check on the work of the repair crew.

How Frequently To Inspect Motors

In deciding on how frequently to inspect the motor starters it will be well to take into consideration the duty. Some starters may be used only once a day, others may be placed in service where they are started two, three or a dozen times a day. However, all starters should be inspected at least once in six months. Generally where starting duty is severe, the magnetic switch type of starter will give less trouble than the hand starter. There seems to be a tendency to use magnetic or remote control starters where frequent starting is necessary for they do to a great extent eliminate the personal element in starting, as improperly started motors are a considerable source of trouble. Acid plants, blow pit rooms, and conveyors offer a field for magnetic types of starters which can be put in a room by themselves out of reach of acid fumes, dust, excessive vibration, etc.

Card Form Should Suit Mill

The card form should be developed to suit the particular mill and then the motormen or inspectors should be required to be guided by this card. In this way any tendency on the part of the individual to slight certain parts will be eliminated for he will be required to check each part and note it on the record as being O. K. or otherwise. When this report is made out it should be sent to the man in charge of this work and the inspector or motorman knowing that someone is looking over these reports will be more apt to be thorough in his inspection.

A program should be devised so that this inspection will cover the entire plant in a systematic way. If there is a large number of motors, it probably means that a certain number will be inspected each week. The general apparatus around the plant such as transformers and station equipment should also be inspected periodically. In some mills this work is more or less haphazard and some apparatus, of course, gets too much attention and other apparatus is neglected altogether.

The card records will show the results of inspections and overhauling. If it is found that between inspections certain apparatus gives trouble, the inspections should be made more frequently and vice versa. The keeping of what would appear as a minor record, such as blowing of fuses and overload relays will often times enable those in charge to detect faults in the driven machines. If a certain motor continues to give trouble, it might be well to check the method of starting with a view to instructing those who start it so as to avoid further trouble. It is not uncommon to find men whose duty it is to start motors throughout a paper mill who have the idea that they are helping a starter by operating it slowly.

Service Record Starts With Purchase

When a motor is purchased, the service record card starts with the number on the nameplate rating. When installed, the date, location and driven machine is recorded. Ampere and voltage readings are taken, also air gap, pulley size, belt data and overload protection setting. It sometimes happens that when a motor is installed, certain overload settings are made and later inspection shows that they have been changed. The card record will, therefore, give a check on what the original setting was so that a readjustment cannot be made without detection.

Service data should not be destroyed for when a motor is moved to a new location, a note can be made to that effect and the record continued. This is not a very laborious record to keep because most motors give practically no trouble and only two or three entries per motor may be made during a year's time.

It will also be found an advantage to furnish the men about the mill, who are not electricians, with simple written instructions regarding the operation of electrical equipment, but needless to say these instructions should be made as elementary as possible.

Norwegian Pulp Shipments Decrease

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., October 19, 1925.—Norwegian shipments of mechanical pulp during the first six months of 1925 show a decrease of 56 per cent under those for the same period in 1924, while exports of chemical pulp were 48 per cent higher and those of paper and board 57 per cent higher than in the previous period, according to the Paper Division of the Department of Commerce These fluctuations were due largely to the unsettled condition in the Norwegian industry during the early part of 1924 as a result of extensive strikes.

Great Britain and the United States were the leading customers for chemical pulp, the former having taken 33 per cent and the latter 30 per cent of the total shipments for the first half of 1925. The remainder went chiefly to France, which took 11,534 metric tons, or nearly 10 per cent; Belgium, which took 5,688 tons; Japan, which took 5,458 tons; and British India and the Netherlands which took 3,992 and 3,459 tons respectively.

The outstanding purchaser of mechanical pulp was Great Britain, which received 213,122 tons, or 65 per cent. Of the remaining shipments France took 16 per cent. Belgium and the United States each 6 per cent.

France was the leading purchaser of printing and writing paper, having taken 21,048 tons or 21 per cent of the total exports, with Great Britain a close second with 20,786 tons. Of the balance 20 per cent went to South America, 17 per cent to the Far East, and 10 per cent to the United States. Great Britain was the principal customer for the various classes of packing papers, including tissues, M. G. cap, and pergamyn papers, taking 22,107 tons or 57 per cent of the total. Other purchasers were China, which took 5,945 tons, France with 2,470 tons, Australia with 1,953 tons, Denmark with 934 tons, South America with 821 tons, British South Africa with 650 tons, and British India and Japan, each of which imported less than 500 tons. Exports of this class of paper to the United States amounted to only 178.

New Developments in Refining and Finishing of Paper Pulp*

By Dr. K. A. Pelikan, National Homogenizer Corp., New York

Much has been said and written about colloid chemistry and colloid mills, and also about their application to industrial and chemical purposes. But in spite of this the industry seems at the time not yet convinced of the advantages of this new kind of thinking in meta-chemical terms. One seems to hesitate to make the great step towards this unknown world of the "neglected dimensions."

Further, it is surprising after the thorough investigations of Ostwald and Lorentz, Klemm, Jannata, Smith, Schwalbe and other scientists, that in the paper industry, which appears to have many colloid chemical problems, more information has not become public on improvements to equipment and modifications of theory.

So far as I can see, one of the retarding influences must have been the absence of a suitable device for the application of colloid chemical processes. However, we now have succeeded in developing the construction of machines for this purpose. Of course, even today, there is not a machine which gives *real* colloidal suspensions, i.e., suspensions of particles with uniform size and a diameter *less* than 0.1 μ or 1000Å.[1] But in many cases the industry does not want this fine state of division and is satisfied with machinery which allows the splitting up of particles, if necessary, to a size of 1 to 3 μ, such machines permit of carrying out all kinds of colloid chemical researches.

Now, you all know where in paper industrial processes colloidal and chemical reactions take place. I will not attempt to recapitulate all of them here, but let me name briefly some of these problems before going into details.

Cleaning of the Halfstuff

Take, for instance, the pulping and cleaning of the halfstuff; new sulphate; or old paper pulp: how shall it be torn into single fibers without destroying the lengths of the fibers? How can lumps be avoided? How can the fibers be purified from dirt, oil, printing ink, colors, etc., without attacking them by heat, alkali, or other treatments? There is further the most important question of sizing with rosin without saponification.

You probably have not seen colloidal rosin which has not been treated with alkali, thus forming the rosin milk? Why not avoid the alkali altogether and use only the rosin in suspended form?

And finally how can the fillers be gotten smooth and the particles small enough to have finer-than-dust consistency in order to be able to surround the paper fibers thoroughly while being mixed and precipitated.

Some of these questions have already been discussed by brief claims of colloid mill inventors and slightly touched upon by their distributors, but nevertheless, I have not yet seen a paper or heard of a factory in which they have been used in this country.

It might properly be said that the aforementioned processes have been brought to a better completion by the new Hurrell Homogenizing Machine, which might do revolutionary work also in the paper industry as it is doing in other branches.

Investigating some questions of cellulose chemistry, for which we wanted to use old newsprint as the raw material, we found that under certain conditions, the mill would not hurt the fiber appreciably, but it would thoroughly separate the fibers from each other. At the same time we observed that the printing ink colored the wash-water heavily, thus showing us that at least part of it had been separated from the fibers. We further observed that all lumps had disappeared; in other words, only single fibers were found to be apparent in the diluted pulp. Investigation under a magnifying lens did not reveal a shortening of these fibers compared with the raw material.

The material to be fit for the mill must first be soaked in a liquid and torn into smaller pieces. Lacking a pulper, we took dry sulphite pulp, or magazine paper, or newsprint and drove them through a meat chopper. Later, by courtesy of Mead Patton & Company we got some crude paper pulp out of the soaking tanks and the old-paper washers. With all of these samples, we obtained very distinctive results, as you might see from these unsized paper samples.

But the deinking process was not entirely solved by this treatment. We did get rid of large quantities of ink and color, and the resulting paper was good enough for several commercial purposes. But in order to obtain the same color as the original paper had before printing I found another distinct colloid chemical process effected the good results.

You are aware that oil and rosins can be dissolved by solving agents. That is nothing new, and, besides, is somewhat expensive; or you might treat the pulp by heat and alkali, etc. Now, with steam alone you will not get much chance for removing the ink and colors. But you can do this by putting the rough fibers into a cold solution of sodium hydroxide and passing it immediately through the colloid mill. This manipulation works fairly well and surpasses the expectations.

But as to the properties of alkali, I wish to call your attention to the fact that alkali changes the constitution of the cellulose, and this made us reduce the percentage of alkali and speeding up the time between mixing the fibers with the liquid and treating them with the colloid mill. We finally reduced the percentage as low as 0.1 per cent of alkali (pulp content about 4 per cent or 5 per cent) and still got results which might be very satisfactory for the cheaper grades of paper and some better grades.

On the other hand, we wanted to get rid completely of the treatment with free alkali with all its unfavorable properties and changed to another combination.

A short time ago some foreign inventors proposed to treat fibers with solving agents in combination with hydroaromatic derivatives and hydrotropic substances. Frankly speaking, this idea was excellent; the lyophil substances emulsified or solvatized the oils and rosins, thus also freeing the fibers of the adhering ink. But this is still expensive, for the concentration as used is high and one needs centrifuges or filter presses to save the expensive material.

Two Processes Combined

Well, then, I got the idea of combining these two processes; and in doing this I found that only a very small amount of so-called solving agent is necessary, which, besides this, can be recovered partly by treating the wash-water with acid. In this way you can control the costs and results and vary them just as you wish the finished paper to be. Much solving agent and *thin* pulp gives the best results and is relatively most expensive. Less solving agent and *concentrated* pulp costs less but does not give such good results.

You see, gentlemen, all this can be done in one operation, and after a short washing your pulp is ready to be mixed with sizing and filling materials, and then to go to the paper machine. Until now we have avoided the beater. It might be, that its use will be entirely eliminated in the next step of the process: the sizing by mechanical means. But it shall be up to you to decide if this is objectionable. We were more interested in another angle; that

* Presented at the meeting of the Technical Association of the Pulp and Paper Industry at the Chemical Exposition, New York, week of September 28, 1925.

[1] Wave length of Na-light: ca 5890Å.

is the *manufacture of size* by means of colloidal suspension of the sizing chemicals. There were many possibilities to start with, if you consider the various sizing materials and processes which have been published since Schwalbe in 1910 pointed to their relation to the colloidal behavior. We had the choice between animal and vegetable glues, slimes, gums, albumin, starch, dextrine, jelly silica, aluminum hydrate, rosin, asphalt, waxes, etc.

To Make a Colloidal Emulsion

Of course, it is easy to make a colloidal emulsion, take for instance montan wax and water, which has been proposed some time ago. It is not necessary to have it very stable, because in the factory it could be used up quickly. We made such suspensions and received good results, but our interest was greater in the conservative line, which also provided the greatest difficulties, namely, the sizing with rosin. This historic material and the process in using it is still to this day similar to the propositions of its first inventor, the old watchmaker, Illig, in Darmstadt in 1807.

At this time we want to call your attention to a very instructive publication by Ostwald and Lorentz[1] where they translate the dynamic of technical sizing into the new terms of colloid chemistry. It is here where they make up a table for the three different types of rosin sizing solutions:

TYPES OF ROSIN SIZING SOLUTIONS

By Ostwald and Lorentz

(a) Upper limitation: "Neutral rosin-sodium-soap solution."
Old paper-glue by Illig.
System $C_{20}H_{30}O_2Na$.
Respectively $C_{20}H_{30}O_2$ + NaOH in changing quantities of aq.

(b) Lower limitation: hydrosol of abietic acid, free of alkali.
System $C_{20}H_{30}O_2$ in H_2O.
Contains the pure colloid dispersed phase of the following solution:

(c) Sizing-milk (by C. Wurster).
System $C_{20}H_{30}O_2$ + o>i equivalent of NaOH in H^2O.
Nowadays used technically as "free-rosin-containing"— sizing solution.

Speeding Up the Manufacture

The new homogenizer makes it possible to speed up the manufacture of the three mentioned liquids. To start with liquid (a) this is easy to make by putting the pulverized rosin into the calculated diluted NaOH solution, stirring it and passing it through the homogenizer. The resulting product can immediately be used for the pulp.

Then let us take (c) this also can be made by an operation similar to (a) and the quantity of rosin which you like to incorporate into the soap depends on the aging qualities you expect. Ostwald and Lorentz show that rosin soap solutions (i. e., pure sodium abictinate) have aging properties; even after so short a time as two hours they show sedimentation of free acid. The aforementioned authors obtained their suspensions by evaporation in a vacuum, the soap containing 13 times the amount of suspended free rosin. We could stabilize this kind of alkaline and other suspensions to a certain degree by adding emulsifying agents or other materials so that they could practically be used, even if there was sedimentation. In the following examples you may see how we did it.

That leads to type (b) of the table. Using the definition of Paul, this would be a hydrosol of 8—pinin acid, free of alkali, Plauson claimed in 1920 for the first time to have obtained colloidal rosin by mechanical devices. Later Lorentz claimed the same, figuring that his dispersions were white and contained "about no dispersoid like alkali." Now when it comes to exact definitions the type of hydrosol which might be manufactured by the colloid mill is only a rough suspension having a particle diameter more or less than i μ. But this dimension seems to be small enough to give satisfactory results.

[1] Koll.-Zeitschr. 1923, 119 and 195.

Difficulties Experienced

While passing the rosin water suspension through the mill difficulties were experienced in stabilizing the resulting suspension; the rosins coagulated immediately and stuck together while stirring and standing. Since we wanted to avoid alkali and saponification we found after various investigations that there were some other ways to get into the right direction. The main principle was the embodying of filling materials between the sticky rosin particles to prevent this action. These materials could later be removed, if necessary, after the mixing with the pulp had taken place. May I show you a little table of these possibilities which we tried?

a. *Rosin and fillers.* (Not removable).
   1. Montan Wax.
   2. Fibers (pulp).
   3. Clay, satin-white, blanc fixe, etc.

b. *Rosin and chemicals.* (Removable).
   1. Mg $(OH)_2$.
   2. Al $(OH)_3$.

c. *Rosin and emulsifying agents only.*
   1. Glue.
   2. Casein.
   3. Viscose.

Let me describe first of all our magnesia-sizing process. We spent considerable time in this investigation, which seemed to be a nice combination of all kinds of chemical and physical influences.

Perhaps you are aware we are making a very cheap and pure milk of magnesia by treating MgO with water in the homogenizer. $MgO + H_2O = Mg(OH)_2$. This process upsets all old-fashioned precipitation processes as prescribed in the Pharmacopea, and some manufacturers of milk of magnesia already have started this new method with our machine. Now if we add to this suspension of $Mg(OH)_2$ a proper amount of powdered rosin and pass it through the colloid mill we will get a fairly good suspension to act as sizing material.

Disposition of the Magnesia

Let us set aside the possibility of having formed the magnesia salt: $Mg(C_{20}H_{30}O_2)_2$. Then your question arises as to the disposition of the magnesia in the beater. Well, there are two ways: The first one is to let it stay in the pulp and act as a filler, and the other one is to remove it by adding acids until neutralization takes place. We could observe that the flocculation sometimes starts without adding electrolytes. This coincides with the colloid chemical point of view. In most cases you might wish to get rid of the $Mg(OH)_2$: The adding of the acid until the isoelectric point is reached, changes it into $MgCl_2$ or $MgSO_4$, thus forming at the same time a strong flocculation agent:

$$MgO—H_2O = Mg(OH)_2.$$
$$Mg(OH)_2 + H_2SO_4 = Mg \cdot\cdot SO_4'' + H_2O$$
positive electr. charge

In consideration of the latest publications I would not suggest to add a *surplus* of sulphuric acid to speed up the flocculation, as acids generally show low flocculation values. Teichner states that the *neutralization* of hydroxyl "ions by a certain quantity of acid ·· will facilitate the flocculation with aluminum ··· sulphate, therefore I would suggest to do the same in this process. Then *after* the neutralization, if necessary, add Al ··· ions, which give the best results in forming a positive charged bridge between both the negative charged rosin and pulp particles, acting as Ostwald and Lorentz claim as an "electrostatic sticking agent." Our studies of the chemical dynamic of this magnesia-rosin problem are not yet finished and we reserve further publication.

The time is too short to discuss more details of this interesting process. Let me tell you briefly, that besides this suspension we also built up rosin suspensions in connection with montan wax or fibers as fillers, or with glue or casein as emulsifying agents. All these materials could be transformed into suspended phases by the colloid mill, and showed in most of the cases satisfying reaction properties with the flocculation agents.

The Filling Materials

Having provided you with a short survey of the sizing materials, now let us take a glimpse at the filling materials. We have succeeded in wet-grinding of all kinds of chemicals by the aid of the Hurrell homogenizer. The results were impalpable powders. This might eliminate all difficulties with your outfit of ball mills, sifting machinery, etc. Of course, the material must previously have a certain degree of fineness, but this is within the commercial limits of powdered materials. By treating these crude commercial materials in the presence of water with the colloid mill you will get a state of fineness which was unknown until now, and which surpasses every material manufactured by every dry-grinding process. To give you an example: We have milled dyestuff pastes into a finely divided state so as to enable the resulting material to give a better yield, better and homogeneous appearance and better selling qualities.

The description of the single types of filling suspensions would go too far and we must come to an end.

Gentlemen, you may possibly think that all this is not the non plus ultra of improvements, and I agree with you that ultimately there might be found better methods. But remember, these researches were not started to make new inventions, merely to show that the application of the new homogenizing machinery might have a distinctive influence in the development of certain paper processes with regard to the growing knowledge of the colloid chemical behavior.

We therefore will appreciate every consideration you may give these investigations and will furnish you with all data concerning the machinery or the application of the process.

Electric Pumping In Paper Mills

By R. H. Rogers, Industrial Engineering Dept., General Electric Co.

Material handling in pulp and paper mills is very largely a matter of pumping fluids from one place to another. Air, gas, oils, acids, raw water, filtered water and water with greater or less admixtures of pulp constitute the materials moved and the continuity of these movements is one and the same with continuity of production. In a "news" mill, 2000 tons of liquid is pumped per ton of paper produced, this pump duty being divided between make-u water from the river and the three great internal circulating systems: the sulphite department, the ground wood department and the machine room.

The horsepower required for pumping, including vacuum pumping, amounts to at least 16 per cent of the total power consumption of the mill and taken with its vital importance it deserves most careful scrutiny.

Three Essentials to Good Pumping

There are three essentials to good mill pumping.

Continuity of pumping service.

Minimum Kv-a hours for pumping per ton of mill product.

Least possible man-hours and materials for maintenance of pumping service.

There are five elements in the elements in the pumping system that are responsive to engineering attention, to the end that the three essentials mentioned may be improved.

The piping. The pump. The motor. The wiring. The control.

Should Approximate Straight Line

The piping should approximate as closely as practicable a straight line between source and delivery. Dynamic head should exceed static head as little as possible, for needless head imposes a load that has to be paid for year in and year out during the life of the plant. Head is made up of plus or minus suction, discharge head, friction head and velocity head. Low or negative suction head is desirable. Discharge should be arranged to enter the receiver low down, that is, the liquid level should determine the head. Friction head can be kept down by using short pipe lines, few bends and having those of long radius; the avoidance of Tees and the use of smooth pipe and fittings. The velocity head which varies as the square of the velocity can be kept down by making the pipes 1½ to 2 times the diameter of the pump outlet. Piping should be well supported so as not to impose strains on the pump connections.

Pumps To Be Selected

Pumps selected for motor drive should be those designed by the manufacturers to run at synchronous speeds and for induction motor drive the 1750 and 1150 speeds should be chosen, as lower speeds begin to affect power factor. Centrifugal pumps are now designed for high efficiency at a specified speed head and output. Any deviation as to head is likely to have a very marked effect on efficiency. The characteristic load curve should droop at both ends to avoid overloading in case of dead end or free discharge operation through accidents or oversights. Lubrication, quality of bearings, centering, sealing and balance should all be up to high grade specifications.

Selection Fairly Limited

The selection of pump motors is fairly limited to squirrel cage induction motors and synchronous motors. High efficiency, and for the induction motors, high power factor are to be specified. The motor design should be such as to protect the internal parts from mechanical injury and from splashing water, but ample ventilation should be left to insure cool operation. The bearing should be accessible without removal of coupling, motor or pump. Insulation for pulp and paper mill service must needs be of the highest class known to the art to long withstand the rigors of mill service.

The Matter of Wiring

Wiring, being out of sight and out of mind, is not subject to the protection of systematic inspection and therefore should be purchased and installed on the once-for-all basis. Liberal cross-section to care for possible additional loads, the best class of insulation and conduit installation of conscientious and competent men will go far to ward off trouble. The conductors should be well anchored against creepage, the conduit fittings provided with motors should be used and all joints should be thoroughly soldered and rubber and friction taped to avoid exasperating small grounds that are hard to trace but which lead to endless troubles.

Control elements of whatever sort should be installed away from dripping water and in a light convenient place. Operators should be instructed in motor starting to avoid unintentional abuse of the equipment. Overload settings should be checked frequently to detect deliberate readjustments. Parts subject to deterioration should be few and accessible. An ammeter should be included with every pump control to provide a ready check on the pump load.

In general the merits of the pumping system will be enhanced by a common sense inspection routine carried out with the idea of preventing trouble rather than making a record in repairing break downs. A reasonable supply of spare parts for pump, motor and control should be on hand to minimize time out of service.

Use of Synchronous Motors Spreading

The use of synchronous motors for pump duty is spreading in pulp and paper mills, especially for the very large pumps and for

* Presented at the meeting of Canadian Pulp and Paper Men, sponsored by the Canadian General Electric Co. at the King Edward Hotel, Toronto, Ont., October 12, 13, 1925.

the vacuum pumps which are necessarily of slow speed. The Nash vacuum pumps are now being equipped with TS synchronous motors overhung on the pump shaft. This construction is very economical of space and the number of parts to maintain is reduced to a minimum. The vacuum pumps form an important part of the total pump load. A 164" machine requires about 210 h.p. for this service. Motors rated 104 h.p. at 225 r.p.m. 60 cycles are specified for this work and the running light load is 55 h.p. with a load of about 85 h.p. for 20" vacuum.

Power factor improvement follows the use of synchronous pump motors and while not needed for the system as a whole, where synchronous grinder motors are used, power factor improvement is often of benefit to a local section of the mill.

In the matter of applying the proper pump to a given duty there is a great amount of continuous loss of power going on even in the best mills. It requires only a moderate deviation from the designed head to badly affect pump efficiency and motor power factor. Fortunately motor efficiencies are about equally good above a little over half load, so that factor has little effect.

"Rating of Merit"

Motor driven pumps may be given a "rating of merit" based on gallon-feet per Kv-a minute. Kv-a being chosen in order to include the power factor element. From a study of test records of a great number of pumps in service we may assume as par or satisfactory performance the following:

75 h.p. to 100 h.p. 3500 gallon feet/Kv-a minute.
40 h.p. to 60 h.p. 2800 gallon feet/Kv-a minute.
20 h.p. to 35 h.p. 2500 gallon feet/Kv-a minute.
7½ h.p. to 15 h.p. 2000 gallon feet/Kv-a minute.

From tested pumps in which all factors were carefully checked we may make the following groups:

Group A—Pumps operated near rating, motors fully loaded.
100 h.p., designed head 50', operated 55', 3600 g. ft/Kva-min.
100 h.p., designed head 150', operated 167', 3340 g. ft/Kva-min.
75 h.p., designed head, 40', operated 44', 3370 g. ft/Kva-min.

Group B—Pumps operated below rated head. Motors not fully loaded.
100 h.p., designed head 60', operated 49.5', 2230 g. ft/Kva-min.
40 h.p., designed head, 160' operated 135', 2560 g. ft/Kva-min.
40 h.p., designed head, 45', operated 37', 2090 g. ft/Kva-min.

Group C—Pumps operated off rating. Motors underloaded.
25 h.p., designed head 60', operated 30', 1470 g. ft/Kva-min.
35 h.p., designed head 98', operated 21', 1220 g. ft/Kva-min.
25 h.p., designed head 28', operated 36', 1460 g. ft/Kva-min.
60 h.p., designed head 56', operated 70', 1970 g. ft/Kva-min.

Group D—Exceptionally bad applications.
100 h.p., designed head 140', operated 167', 930 g. ft/Kva-min.
75 h.p., designed head 96', operated 46', 775 g. ft/Kva-min.
50 h.p., designed head 60', operated 23', 790 g. ft/Kva-min.
25 h.p., designed head, 92', operated 45', 405 g. ft/Kva-min.
7½ h.p., designed head 10', operated 23', 115 g. ft/Kva-min.

Well Fitted for Their Jobs

As far as appearance goes all the above installations look well fitted for their jobs and most of them will go on for the next ten years delivering altogether inadequate gallon feet for the Kv-a input. Dairymen have long since learned to turn "boarder cows" into beef and poultrymen periodically check up poor layers and turn them into pot-pie, but mill men are still satisfied to entertain boarder pumps. To bring home more forcibly a comparison of actual performances attention is called to two 100 h.p. pumps in the same mill operated thus for about five years. Pump A—100 h.p. nominal 106 h.p. actual, 90.5 per cent efficiency of motor, .9 power factor, 79 per cent pump efficiency, 97 Kv-a or 87 Kw input, 3600 g. ft/Kv-a min.

Pump B—100 h.p. nominal, 53 h.p. actual, 90 per cent efficiency of motor, .81 power factor, 23.2 per cent pump efficiency, 54.4 Kv-a or 44 Kw input 900 g. ft/Kv-a min.

At $25.00 per horsepower year for 10 paper mill years Pump A will require $28,000 worth of power. Four of Pump B will require $112,000 worth of power for the same output. Difference $84,000 or the gross profit on a 100-ton machine for three months.

It would certainly pay to rearrange the pumps so as to get them in the proper class as to gallon feet per Kv-a minute.

Control Devices

As to control devices, the standard hand operated compensator CR-1034 is usually applied with squirrel cage motors larger than from fifteen to twenty-five horsepower. An enclosed disconnecting switch or an oil switch is included in the line ahead of the compensator. For throwing small pump motors directly on the line an enclosed contactor panel is used of the CR-7006 type. This device is actuated by a push button station.

Synchronous motors Type TS, form PK, take automatic reduced voltage starters of the CR-7061 Q1 type. As an alternative for hand control a starter is made up of a CR-1034 compensator, a field switch and rheostat and ammater. These motors run at 1200 r.p.m. for pump service and are available in sizes from 30 to 150 h.p. The TS form E synchronous motors are rated 20 h.p. to 700 h.p. with speeds ranging down from 450 r.p.m. Such motors can be thrown directly on the line by means of the automatic full voltage panel CR-7065 H1 preceded by a Trumbull Switch or a K-5 oil switch.

The preceding control items apply up to 600 volts; for 2200 volts another line of starters is available.

The CR-7061 S1 reduced voltage starter is used with small motors 1200 r.p.m and the CR-7061 M1 is used with the Form E slow speed motors for 2200 volts and up to 6000 volts.

The judicious choice of high speed fully loaded induction motors together with a number of synchronous motors will result in a high power factor at least as far as the great family of pump motors is concerned. This power factor improvement will reduce the necessary investment in cables and transformers, will insure better voltage conditions and less input per gallon foot of pumping duty.

Exports of Pulp Wood From Finland Increase

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., October 19, 1925.—According to Assistant Trade Commissioner Emil Kekich at Helsingfors, exports of pulp wood from Finland during the first seven months of this year reached the record figure of 823,667 cubic meters, valued at about $3,070,500, compared with only 478,276 cubic meters valued at $1,781,000 during the entire year 1924. Both Germany and the Netherlands, the principal consumers of Finnish pulp wood, came into the market very actively during June and July. Germany took 306,280 cubic meters in the first seven months of this year, compared with 194,690 during the whole of 1924. The Netherlands took 303,265 cubic meters, against 81,388 in 1924.

Freight Rates on Paper Found Unreasonable

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., October 19, 1925.—Rates charged on eight carloads of paper and paper products from Hamilton, West Carrollton, and Miamisburg, Ohio, and Chicago, Ill., to Dallas, Tex., has been found unreasonable by the Interstate Commerce Commission. Reparation has been awarded on seven cars and denied on one car for want of proper party to complaint. This decision was rendered by the Commission in the case of the J. W. Butler Paper Company against the Cincinnati, Indianapolis & Western Railway Company et al.

Waste Liquors and Cases of the Paper Industry

Survey of the Recent Domestic and Foreign Patent Literature on the Utilization of Waste Liquors and Waste Gases of the Pulp Industry, 1912-1924

By A. Schrohe[1]

Translated, with additions, by Clarence J. West, Chairman Committee on Abstracts and Bibliography, T. A. P. P. I. (Contribution No. 47 of the Committee).

(*Continued from the issue of October 8*)

71. 1919. D. R. P. 309,155. Zellstoffabrik Waldhof, Mannheim-Waldhof. Method for preparing a highly active decolorizing carbon.

The residues from the hydrolysis of cellulose or cellulose-containing materials by means of acids, acid salts, or the like, are coked. Thus, wood in the form of sawdust is treated first with excess of concentrated sulphuric acid and the mixture diluted with water after some time and boiled until no further increase of the sugar content of the solution can be detected. The pulverulent residue is then separated from the sugar solution, washed, dried and carbonized in tightly closed chambers or in iron retorts, employing either ordinary firing or superheated steam. According to addition patent 330,942 (1920) the residue of the hydrolysis is subjected to extraction with resin-dissolving agents (saponifying agents or hydrocarbons, alcohols, acetone, etc.) before the coking.

72. 1919. D. R. P. 310,819. Norwegian 28,641 (1918). R. W. Strehlenert, Gothenburg, Sweden. Method for obtaining the organic and inorganic substances contained in waste sulphite liquors by decomposing the liquor under high pressure and at a high temperature and the transformation of the free and bound sulphurous acid present in the waste liquors into sulphuric acid.

The waste liquor is partially concentrated so that a part of the calcium salts in the liquor is precipitated and sulphurous acid is removed. During the evaporation a part of the calcium salts precipitate as sulphate and as acid sulphite. In successive precipitations a higher yield of lignin substances is obtained. *Cf.* D. R. P. 266,096 (1913).

73. 1919. D. R. P. 310,890. L. Elkan, G. m. b. H., Charlottenburg. Fire-extinguishing substance, consisting of waste sulphite liquor or containing the same.

74. 1919. D. R. P. 311,139. Chemische Fabrik Ludwig Meyer, Mainz. Method for preparing neutral saponins from waste sulphite liquor.

The method is characterized by the separation of saponins from waste sulphite liquor by the ordinary method of saponin precipitation or by acidifying the solution with hydrochloric acid and adding concentrated or saturated solution of salts, particularly sodium chloride (salt).

75. 1919. D. R. P. 311,933. F. Bergius and E. Hägglund, Essen. Method of utilizing the waste liquors from the alkaline digestion of plant materials.

The liquors are heated at high pressures and temperatures. If soda pulp liquors are heated under pressure at 250-300°, the organic constituents are almost completely percipitated after two hours in the form of a coal-like product. The carbonic acid evolved in the process carbonizes the alkali present; the excess is allowed to escape to avoid too high pressures. Working pressures of 50 atmospheres are sufficient.

In Cellulosechemie, 1924, no. 8, p. 81-87, Hägglund, in his investigations on the digestion of pine wood with alkali, etc., discusses the new methods for the regeneration of alkali in soda pulp mills and points out the importance of the rational utilization of the organic substances of the black liquor. He shows the possibility of obtaining acetone and methyl alcohol as by-products of the soda pulp process in yields which are essentially higher than those from any of the known methods.

76. 1919. D. R. P. 312,495. Norwegian 27,928 (1917). British 103,479; 103,480 (1917). French 484,150 (1917). E. Oeman, Stockholm, Sweden. Method of preparing azo dyestuffs.

Lignosulfonic acids or lignonsulfonic acids or their salts are treated with diazotized amines or their derivatives. The starting material is waste sulphite liquor, which is freed from the lignin-sulfonic acids or the lignonsulfonic acids or their salts by addition of salts. The azo dyes are bright red to dark brown. *Cf.* Norwegian patent 28,918 (July 8, 1918) and 28,934 (July 15, 1918). C. A. 13,518.

77. 1919. D. R. P. 313,007 (addition to D. R. P. 285,752). E. L. Rinman, Stockholm. Method of treating waste sulphite liquor with alkali, either in its unchanged form or after it has been freed of one or more of its constituents.

This method proposes that, before the liquor is heated with alkalies, especially calcium hydrate, it is regenerated by pressure and used for cooking new amounts of wood.

78. 1919. D. R. P. 313,150. J. Shotwell Robeson, Pennington, N. J. Method of preparing a tanning solution from waste sulphite liquor containing free lignosulfonic acid in addition to its salts.

The waste sulphite liquors, previously freed from sulphuric acid compounds by neutralization with lime and concentrated, which contains the lime bound to the lignosulfonic acid, is treated with just enough sulphuric acid and alkali sulphates or bisulphates so that the solution does not contain free mineral acid, after which the lime remaining in solution as sulphate and the other bases, especially iron, are precipitated by the addition of a considerable excess of oxalic acid. The tanning agent must not contain lime or free mineral acid.

79. D. R. P. 313,607. E. L. Rinman, Stockholm. Method for the dry distillation of waste liquor of the soda and sulphate pulp processes with calcium hydrate.

The essential feature of the method consists in that calcium hydrate in the form of milk of lime is mixed with the waste liquor, by which at least a 30 per cent higher yield of acetone spirits is obtained than if the lime is mixed in the form of a finely pulverized oxide or hydrate (dry slaked lime).

80. 1919. D. R. P. 314,054. Ricard Adam, Bremen. Method for utilizing the lime waste liquors of the straw paper and straw board mills.

These waste liquors are concentrated, dried and finally subjected to dry distillation.

81. 1919. D. R. P. 315,837. Ernst Natho, Essen-Bredeney. Method for removing iron from inorganic salts.

The concentrated solutions are treated with waste sulphite liquor and the resulting precipitate filtered. Dilute solutions of iron-containing inorganic salts may also be treated with waste sulphite liquor and then concentrated until the solution is saturated and the iron precipitates. The dextrins of the waste liquor precipitates, carrying down with it the iron-tannin compounds. In this way completely iron-free aluminum sulphate and potassium salts may be obtained.

82. 1919. D. R. P. 316,234. K. Hüttenes, Düsseldorf. Preparation of adhesives from waste sulphite liquors.

[1] Papierfabrikant 23, 30-33, 63-65, 89-92, 158-161, 251-253, 284-287, 293-296, 306-307 (1925).

Crude waste sulphite liquors are treated with lead acetate (sugar of lead) and concentrated, giving light colored adhesives.

83. 1919. D. R. P. 316,592. Canadian 192,187. Erik Oeman, Stockholm. Method for separating of water from the waste liquors of sulphite or sulphate pulp mills.

The solutions are repeatedly cooled to a temperature below the freezing point and the snow and ice crystals formed during each freezing are removed by filtration or centrifugation. By this method the waste liquors can easily be concentrated to a dry substance content of about 40 per cent.

84. 1919. D. R. P. 317,760. E. W. P. Krahl, Hamburg. Method for preparing a polishing agent for leather from waste sulphite liquors.

The waste sulphite liquor is treated with ethyl chloride, by which the liquor loses its adhesive properties.

85. 1919. D. R. P. 317,998. H. Kaserer, Vienna. Method for acidifying mash.

Distillery mash, especially molasses mash, is acidified by adding fresh or concentrated waste sulphite lye and then fermented in the usual way.

86. 1919. U. S. 1,298,476 and 1,298,477. Viggo Drewsen, Brooklyn, N. Y. Method for treatment of waste sulphite liquors.

The liquor from the digester is treated with a considerable excess of caustic material (soda lime or sodium hydroxide) and heated several hours under a pressure of 80-100 pounds per square inch with stirring. The converted liquor is then filtered from the lignin (about 30 per cent of the dry weight of the organic matter in the original sulphite liquor), which may be more conveniently effected after carbon dioxide gas has been passed through the mixture to aggregate the precipitate. The filtrate, after it has been used for the production of alcohol, is concentrated to a sirup in a multiple effect evaporator, treated with 20-50 percent sodium hydroxide or lime and distilled with superheated steam at 300-500°C., in order to obtain ketones, methyl alcohol and other volatile organic substances.

87. 1919. U. S. 1,298,479. Viggo Drewsen, Brooklyn, N. Y. Method for treating the waste liquors of the soda pulp process.

"Black liquor" from the manufacture of pulp by the soda pulp process (especially that from wood of the poplar, sycamore and gum tree) is concentrated until it contains only 50 percent water, treated with sodium hydroxide equal to about 20 percent of the organic substances present and boiled under pressure at a temperature of about 125° C. for at least an hour to effect conversion of organic substances and is then evaporated and converted into a dry mixture after addition of calcium hydroxide to an amount at least about equal to the organic substances present. The dry material is subjected to dry distillation with steam at a temperature of 300-500° to recover acetone, methyl alcohol and other volatile products. A yield of 5 to 10 percent of these substances (based on the amount of organic substances present in the starting material) may be obtained together with about the same quantity of a heavier oily distillate and a solid residue is left which may be burned and extracted to obtain inorganic salts.

88. 1919. U. S. 1,298,481. Canadian 201,865 (1920). Viggo Drewsen. Method of treating the waste liquor of the soda pulp process.

The black liquor is concentrated to a water content of 50 percent and while hot saturated with carbon dioxide under pressure; the ligneous products are filtered off and the filterate concentrated to about half its volume. This concentrated filtrate is mixed with 50 percent of burnt lime, so that a dry powder results, which is then aggregated by treatment with carbon dioxide and moisture. This product is then heated to 160-200° C and leached with cold water. Concentration of the extract gives crystalline *sodium acetate.*

89. 1919. U. S. 1,303,176. Norwegian 30,921 (1920). Viggo Drewsen, Brooklyn, N. Y. Method of preparing a tanning agent from lignin.

The waste sulphite liquor, containing from 2 to 6 percent sodium hydroxide, is heated under a pressure of about 100 pounds per square inch for several hours. This decomposes the lignosulphite and precipitates the lignin. If carbon dioxide is passed through the digester material under pressure, the yield is considerably increased. Black liquor may be worked up for lignin in a similar manner. Sulphite liquors which have been fermented and freed from alcohol may be similarly treated. The lignin material is purified by solution in sodium sulphite and precipitation by sulphuric acid. The precipitated ligno-tannin (probably lignosulfonic acid), after drying, forms a brownish-yellow powder, soluble in warm water and suitable for tanning.

90. 1919. U. S. 1,305,209. Canadian 199,085 (1920). A. W. Goulding, Trenton, N. J. Fuel briquettes.

A binding agent for coal briquettes consists of a paste of ordinary brick clay and cell pitch.

91. 1919. U. S. 1,311,215, 1,311,222. C. Ellis, Montclair, N. J. Pulverized waste sulphite liquor.

[A solid binder for use in roads or for making briquettes for coal, iron ore or other materials or for use as a core compound is formed of solids of waste sulphite liquor mixed with 5-10 percent of sodium silicate, partly neutralized and in dry form. In roadmaking one percent or more of the binder may be used. In the concentration of the waste sulphite liquor, fillers such as talc, kieselguhr or fuller's earth may be added to facilitate evaporation to dryness. These fillers also serve to weight the particles of the product so that they are not so readily blown away when applied to roads in windy weather. U. S. 1,311,216 relates to the production of waste sulphite liquor solids, partially neutralized and dried by atomization of the liquor. This material may be mixed with a petroleum or asphaltic oil or calcium stearate or fillers and used as a binder in roads or for making briquettes of ore, fuel or other materials. It may also be dissolved in water and used for tanning. U. S. 1,311,217 relates to partial neutralization of waste sulphite liquors by lime, evaporation to a solid condition and grinding to obtain a soluble powder adapted for similar uses. U. S. 1,311,218 relates to a method of obtaining similar material from waste sulphite liquor by partial neutralization, followed by atomization and drying with exposure to air which may be mixed with combustion gases to prevent undue oxidation. U. S. 1,311,219 relates to preparation of aqueous solutions of desiccated sulphite liquor constituents prepared as previously described. U. S. 1,311,220 prescribes the addition of lime to render these binders insoluble, so that briquettes, etc., made with them will stand exposure to the weather. U. S. 1,311,221 relates to the manufacture of briquettes with binders prepared as described in the preceding patents. U. S. 1,311,222 describes the manufacture of briquettes, etc., with these waste sulphite liquor binders, using lime or other insolubilizing agent and asphaltic oil or other water proofing material.]

92. 1919. U. S. 1,312,293. O. W. Wilcox, Dover, N. Y. Treatment of waste sulphite liquor.

The crude hot liquor discharged from the digester as well as the hot spent liquor from the still are utilized as a source of heat for warming the fermented liquor as it is led to the still.

93. 1919. Austrian 77,284. Norwegian 27,613 (1917). Aktiebolaget Ethyl, Stockholm. Sweden. Treatment of fermented waste sulphite liquor before distillation.

The tendency of the fermented liquor to foam in the distillation apparatus is decreased or diminished by subjecting it to the action of air through spraying, by which the carbon dioxide is removed.

94. 1919. Austrian 78,813. O. Lühras, Hamburg. Method of preparing a colorless, technically lime-free tanning extract from waste sulphite liquor.

To precipitate the lime there is used sodium or potassium bicarbonate, finally in connection with phosphoric acid or ammonia and phosphoric acid.

95. 1919. Austrian 80,445. Norwegian 30,632 (1920). Metallwerke vorm. J. Aders, A.-G., Magdeburg-Neustadt. Method for removing the foul smelling substances from the waste gases of pulp mills.

Small pieces of wood, sawdust, etc. are introduced into the gas current; these become coated with the noxious substances of the sulphate process (mercaptans and sulphides) and thus hold them back. These absorbed products are then destroyed by the action of chlorine or nitrogen oxides and the wood is rendered suitable for pulping. The gases may also be mixed with a small amount of chlorine or nitrogen oxides before being passed over the wood. (Nitrogen oxide as a means of destroying the noxious gases was employed by Schwalbe in D. R. P. 218,344 (1910); cf. D. R. P. 389,206 (1924).

96. 1920. D. R. P. 305,091. British 146,430. W. Jeroch, Berlin and Kriegsausschuss fur pflanzliche und tierische Oele und Fette G. m. b. H., Berlin. Method for obtaining fats from waste sulphite liquors by a biological method.

Endomyces vernalis was grown in the aerated and neutralized waste liquors. Beet juice may be added as the source of the nitrogen-containing food material.

97 1920. D. R. P. 316,395. Gustav Busch, Berlin. Method for the preparation of glazier's putty according to patent 269,380.

Wood or straw meal, whiting, tar and concentrated waste sulphite liquors are intimately mixed.

98 1920. D. R. P. 318,701. Otto Rummel, Berlin. Method of softening and germinating grains.

The grain is treated with waste sulphite liquors or the water to be used in the malt house is treated with a certain amount of the liquor. Fermented waste liquors may also be used. The time of steeping is decreased, there is a foaming during the aerating, which facilitates the absorption of the oxygen; the growth of molds in the steeping water, etc., is prevented.

99. 1920. D. R. P. 319,068. Siegfried Herzberg, Charlottenburg. Method for utilizing the cooking liquor obtained in the digestion of straw.

The cooking liquor obtained in the digestion of straw is subjected to electrolysis in a concentration suitable for further digestion, for the purpose of recovering the sodium hydroxide. According to addition patent 321,453 the electrolyte (cooking liquor) or at least the portion to be used as the anode is treated in the cold with mineral acid or bisulphate and, after filtering off the organic substances which precipitate, electrolyzed.

100. 120. D. R. P. 319,929. Norwegian 28,465 (1917). Axel Vidar Jernberg, Stockholm, Sweden. Method for fermenting waste sulphite liquor, etc.

The liquor is neutralized with calcium cyanamide and if necessary, with other neutralizing agents, with or without the addition of water. The calcium cyanamide affords a source of food for the yeast.

101. 1920. D. R. P. 320,301. Chemische Fabrik Rosenberg und Co., Karlsruhe i. B. Method for deliming and tanning of pelts.

The limed hides are treated with liquids obtained by dissolving lime-free, purified and concentrated neutral or acid waste sulphite liquors in glycerol waste pitch in salve form and then diluting with water. [The skins are claimed to lose the lime completely, swell as the pores open and become more pliant.]

102. 1920. D. R. P. 320,508. W. Oehl, Thalmassing, Bavaria. Method of making available the useful substances contained in waste sulphite liquor.

The waste sulphite liquor is treated with silicates or heavy metal compounds, by which the calcium bisulphite is transformed into calcium silicate or an insoluble sulphite and the dissolved resins separate. The final product is obtained in the form of a rosin lime or rosin alkali soap.

103. 1920. D. R. P. 321,331. W. H. Philippi, Offenbach a. M. Method for preparing solutions for tanning from waste liquors of cellulose manufacture.

The lye, if necessary after previous concentration, makes its way along an extended way provided with resistances wherein the lye slowly gives up destructive substances, either by evaporation (sulphur dioxide) or upon cooling or precipitation, thereby preventing the breaking down of valuable extraction constituents. Precipitating agents are added in small amounts at different points along the line of flow. The agitation resulting from the passage of the lye over the resistances facilitates the separation of crystalline substances, such as calcium sulphate, and the oxidation and separation of iron compounds contained in the lye. The extract obtained has strong tanning properties and low ash.

104. 1920. D. R. P. 321,619. U. S. 1,297,028 (1919). J. Soraas, Hardanger, Norway. Method of preparing lignin substances from sulphite liquors by the use of high pressures and high temperatures in two steps.

In the first step the liquor is heated, by partially or entirely indirect heating, to a temperature just below the precipitation temperature of the lignin substances; in the second step the heating is by direct introduction of steam.. *Cf.* No. **61**.

105. 1920. D. R. P. 322,387. Carl Graf, Koln-Rodenkirchen. Method of preparing a tanning substitute.

Vegetable tar is lixiviated with an aqueous solution of sulphites. According to the addition patent 335,869 (1921), waste sulphite liquors of any concentration may be used as the solvent.

106. 1920. D. R. P. 322,461. Firma Fr. Kuttner, Ernst Profeld and Dr. E. Sidler, Pirna. Method of purifying alkaline waste liquors, contaminated and discolored by organic admixtures.

In the purification of alkaline waste liquors contaminated and discolored by organic admixtures, they are concentrated with solid sodium hydroxide to about 50° Bé, then heated, while air is being blown in until the organic substances carbonizes. Oxidizing agents, such as saltpeter, may be added. The process is stated to be a particularly applicable to waste liquors from mercerizing processes and miscose manufacture.

107. 1920. D. R. P. 322,462. Cl. Tittel, Voitsberg, Austria. Apparatus for the evaporation of sulphite liquors.

108. 1920. D. R. P. 322,688. Max Claass, Munich. Method for preparing dextrin-like substances from waste liquors.

The waste liquors are treated with an acid sulphate and a sulphoxylate at a temperature below 100°; this increases the adhesive properties of the waste liquor and brightens its color.

109. 1920. D. R. P. 322,771. A. Achenbach, Nussdorf bei Uberlingen. Working up waste liquors from soda cellulose manufacture.

The waste liquors are subjected to a preliminary thickening to about 10° Bé by means of fire gases in a cooling tower, and then introduced into the evaporator. By this treatment the liquor loses its tendency to froth.

110. 1920. D. R. P. 322,97. E. Arnold, Erfurt. Preparation of a leather substitute by saturating waste sulphite liquors with animal glue.

Layers of paper are saturated with a mixture of animal glue with over 50 percent of waste sulphite liquor, to which formaldehyde is added. The sulphite liquors affect the suppleness of the final product very favorably.

(To be continued)

May Draft Report in Casein Tariff

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., October 21, 1925.—It is understood that Tariff Commissioners Costigan and Glassie have been appointed a committee by the Commission to draft a report on the casein tariff to be sent to the President. While officials of the Commission will not discuss the matter there is some talk that the Commission will send a communication to the President in which it states that steady cost figures cannot be obtained relative to casein and, therefore, no recommendation will be made. This is merely a question of clearing the dockets of the Commission.

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Taxable Income And Accounting Bases For Determining It*

By George O. May

On various occasions when the question has arisen, I have been impressed by the uncertainties and misconceptions shown to exist concerning accounting bases for determining income for tax purposes and in regard to the significance of such terms as "the cash basis" and "the accrual basis" commonly employed in tax practice. It has therefore seemed to me to be worth while to devote some time to a consideration of this subject and in so doing to go back over the developments affecting it since the passage of the corporation-excise-tax law in 1909.

As a preliminary to such consideration it seems necessary to inquire to some extent into the nature of taxable income, but I do not propose to go into this very large subject except in so far as may be necessary to an intelligent discussion of the accounting bases for determining income. To allay still further any anxiety created by the comprehensiveness of the title of this paper, I will add that I shall confine myself to commercial income, which constitutes the major part of the taxable income of the country and presents the more difficult problems and I shall not discuss personal, professional or investment income.

In income taxation, the first problem is to define income and the second to allocate income in respect of time. The question of allocation to sources geographically arises in some cases and presents some difficulties, but this question affects only a restricted field.

The problem of definition resolves itself mainly into a choice between several different concepts of the nature of the income and, though important, is relatively simple. The more serious difficulties are encountered in determining when income emerges from the complicated business transactions of modern commerce so as to be properly taxable.

The accounting bases employed in determining income affect the time when income becomes taxable rather than the amount of income ultimately taxable and this paper therefore has to do mainly with the time element in taxation. This is conspicuously a case where "time is of the essence." Whether an amount is to be deemed taxable in a year of high war taxes or in some remote future year may be of far more practical importance than whether the whole or only a part is to be finally taxed.

What Is Taxable Income?

Since 1913 our income-tax laws have been enacted under the authority of the sixteenth amendment to the constitution, which authorized Congress to tax without apportionment among the several states "incomes from whatever source derived."

Now there are numerous theories as to what is income. In one case (Doyle v. Mitchell) the government argued that the gross proceeds of sale were income. Economists sometimes argue that earnings that are saved are not income, so that what is income is determined by how what comes in is subsequently expended. Apart, however, from any such extreme views, there are two materially different theories of income which are supported by considerable authority: One holds that income is necessarily gain, the other that it may be in part a conversion of capital.

The difference may be illustrated by the case of a man purchasing an annuity. The general public regards the whole of the annuity as his income and this view is shared, I think, by many economists and reflected in the English and probably other tax laws. The actuary and the accountant would, however, insist that only in part is the annuity rightfully called income, a part being a realization of capital.

Congress in 1913 might, I suppose, have adopted either of these theories and if its intent had been clearly manifested the Supreme Court would hardly have rejected that theory.

This, however, Congress did not do. The clauses of the 1913 and 1916 acts purporting to define income or gross income, as definitions, left much to be desired. What are we to infer from the definition of income as including "gains, profits and income" from certain specified sources "or from any source whatever"? Is income something different from gains and profits, and if so, what is the distinction? In section 4 of the act of 1916 Congress provided that annuities in so far as they represented returns of premiums were not *taxable income,* but in doing so it in plain language characterized them as income; the 1918 law retained the exemption but avoided the characterization (Sec. 213 (a)).

It might fairly be argued that Congress, taking the acts as a whole, indicated an intention to tax only gains. This view is supported by the provisions above mentioned and by those allowing depreciation and depletion. On the other hand, the fact that these items were allowed by way of deductions from income or gross income in arriving at taxable income, the limitation of the deductions in purely arbitrary ways, and the language of section 4 of the act of 1916 above alluded to, might be claimed to support the view that Congress intended to assert the right to tax as income what might be in part a conversion of capital, but not to exercise its rights to that extent.

Cost Section

*From "The Journal of Accountancy"

However, this may be, the Supreme Court presumably settled the matter when in the case of *Eisner v. Macomber* it defined income as the gain derived from capital, from labor, or from both combined.

This decision, for the reason that it contained the definition I have referred to and held that Congress had attempted to tax as income what was not income, is of great importance and it may be worth while to discuss it briefly. Many passages from the opinion are of interest to accountants but I will quote only one paragraph:

"After examining dictionaries in common use (Bouv. L. D.; Standard Dict.; Webster's Internat. Dict.; Century Dict.), we find little to add to the succinct definition adopted in two cases arising under the corporation tax act of 1909 (Stratton's Independence v. Howbert, 231 U. S. 399, 415; Doyle v. Mitchell Bros. Co., 247 U. S. 179, 185).—'Income may be defined as the gain derived from capital, from labor, or from both combined,' provided it be understood to include profit gained through a sale or conversion of capital assets, to which it was applied in the Doyle case (pp. 183, 185)."

In the dictionaries cited, both of the views of income above mentioned are set forth; the definition coming closest to that adopted by the court is found in Bouvier's Law Dictionary.

Reference to the decision in Stratton's Independence v. Howbert, in which the definition was first used, discloses that in that case the court was at pains to point out that, as at the time of the passage of the 1909 law Congress had no power to levy a general income tax without apportionment, the theoretical distinctions between capital and income were of little value to the court in interpreting that statute. Curiously enough, also, the case was one in which the court sustained the taxation as income of the proceeds of gold mining without any provision for the exhaustion of the capital represented by the mine. In Doyle v. Mitchell, arising under the same act, the court adopted the same definition in a decision in which it ruled that the proceeds of lumbering could not be taxed as income without a deduction for the capital value of the timber exhausted. However, these decisions being rendered under the excise-tax law, have no necessary bearing on the present question; and in Eisner v. Macomber, which was decided under an income-tax law, none of these special features was present.

Just how far-reaching the effect of that decision is in law is a question for lawyers. The Supreme Court decisions under the excise-tax law of 1909 rather suggest that Congress can levy an excise tax *measured by income* without availing of the sixteenth amendment and in so doing can define income as it pleases without regard to the views of the Supreme Court or any one else. So long, however, as it levies a tax *on income* it apparently can not tax as income what the Supreme Court does not consider to be income.

The point is largely academic and Congress has not shown any disposition to disagree with the general interpretation of income adopted by the court. The two bodies have, it is true, differed on the question whether stock dividends are income; but dividends constitute a special problem and are, both under the acts and under court decisions, an exception to the rule that there is no income unless there is gain. If an investor buys a $100 share of a company which has a surplus equal to its capital stock for $200 a share and if the next day the company pays a dividend of $100 a share and its share fall to par, the dividend is not gain to the investor whether the dividend is paid in stock or cash. Dividends are, however, in general, income, and it is so manifestly impossible to provide for treatment thereof varying according to the circumstances surrounding the holders' acquisition of the stock on which the dividend is paid, that purchasers of stocks of companies having large earned surpluses may reasonably be expected to realize that in making such purchases they not only acquire the prospects of dividends out of profits earned prior to their purchase but also assume the burden of any tax on the dividends they may receive. It was for this reason that Mr. Justice Pitney in the Phellis case said the hardship in the case of such purchasers was more apparent than real. It is on similar grounds that supporters of the English system justify its treatment of the proceeds of an annuity or of mining and similar operations as taxable income without any deduction for exhaustion of capital. In this connection it is pertinent to point out that the English income tax has been levied continuously since 1842 and that therefore the great expansion of industry and corporate enterprise has taken place mainly with notice of the burdens in the form of income tax to which it might be subject.

Other similar cases may arise where something which is not gain is taxed as income. It would probably be a fairly accurate statement to say that the general test of the existence of income is whether there is gain, but that items which ordinarily constitute gain and are commonly regarded as income may be taxed as such even though in exceptional cases they may not result in a gain to the recipient.

As regards commercial operations there are probably few exceptions to the rule that income must be in the nature of gain.

Gain in commercial business is, however, usually not a separate item but a difference between items on opposite sides of the account. On the one side are the proceeds of sale, on the other the costs involved in producing the sales. Frequently also the gain is the result of a series of transactions or a gradual process extending over two or more distinct tax periods. If a taxpayer buys raw materials in one year, manufactures finished goods therefrom in another, sells those goods in a third and collects the proceeds in a fourth year, the ultimate gain is obviously not attributable wholly to any one of these four years, nor is there any way of allocating portions of the gain to the operations of the several years which can be said to be the scientific and only proper way. In one such series of transactions the main factor contributing to the gain may be cheapness of buying, in another low cost of manufacture, in another advantageous selling, and so on. Further, the transactions of a taxpayer are frequently so interrelated that we can not ascertain the profits of any given series separately. Commercial profit is in fact, as an eminent English judge puts it, necessarily a matter of estimate and opinion.

In the determination of income for commercial purposes the best practice is to be governed by considerations of conservatism. Profits are not taken except when and to the extent that they are received or at least reasonably assured. Losses that are foreseen are provided for even though not actually sustained or measured. The Legislature naturally approaches the question from a rather different point of view. On the first point it may be questioned whether Congress has power to tax profits not actually received. On the second, if it allows actual losses as deductions it can hardly be expected to allow deductions for potential future losses to be made at the discretion of the taxpayer.

It should be said at once that Congress has shown no disposition either to tax income not received or to deny losses actually sustained. Indeed, in at least one important instance, it has deliberately allowed the anticipation of potential losses. The provision in the 1918 act that inventories shall be taken on the basis conforming to the best trade practice was enacted with the knowledge that one of the best trade practices was to value inventories at cost where cost was less than market and at market where that was less than cost, thus anticipating a loss wherever market might be below cost. This recognition of one of the best established of those trade practices which find their justification not in logic or scientific considerations, but in conservatism and practical wisdom is very significant. In 1921 also the law was amended to permit deduction of a reasonable reserve for bad debts instead of only debts ascertained to be worthless, thus recognizing another well-established trade practice.

Whether the deductions permitted for depreciation and depletion are properly regarded as provisions for anticipated losses is difficult to say. From the accounting standpoint the provisions for depletion and depreciation of manufacturing plant are elements of cost, which must be provided for before there can be said to be any gain. The decisions of the Supreme Court on this branch of

the subject are not altogether easy to reconcile either with one another or with the court's general definition of income. Quite apart from the decision in the *Stratton's Independence* case, under the 1909 law, the significance of which may be lessened by the fact that the claimants were asserting that all the proceeds of mining were capital, the court has approved under an income-tax law a purely arbitrary limitation on the depletion allowance which it would seem could hardly have been sustained except on grounds which would have applied to the total denial of any deduction. This in turn would seem to mean that depletion is not a factor necessarily taken into account in determining the gain.

One other point may be noted. In general our laws have taxed the income of the taxpayer from his business, which may be less than the total gain from the business to the extent of the portion of the economic gain which the taxpayer may be required to pay over to others in the form of interest, rentals and other participations. In this respect ours has differed from the English system, which assesses against the taxpayer carrying on the business the entire gain from that business without regard to any such distributions, leaving the equitable adjustment between taxpayers to be effected by a system of deductions by the taxpayer when making the distributions, and refunds by the revenue to the distributees if they should be exempt from tax. In the act of 1909 and the income-tax acts up to that of 1918, however, the interest deduction allowed to corporations was arbitrarily limited and the limitation was sustained by the courts. Here again the power to impose purely arbitrary limitations on the deduction would seem necessarily to imply power to deny any deductions whatever. In the cases which came before the court the objection urged was apparently that the limitation was discriminatory and the decisions may, therefore, not be authority for the proposition that Congress has the power to tax all that is economically income in the hands of the person who realizes the income, even though it is not all income to that person. The point might become important, for a tax so levied without some provision for the proper adjustment of the burden between the ultimate beneficiaries of the gain might easily result in a tax on a person receiving the income greater than the portion thereof which he might be entitled to retain. In the year 1917 the limitation on interest deductions undoubtedly worked some hardship, and would have caused gross injustice but for the action of the commissioner in allowing, without any very obvious warrant in the law, the capital sum corresponding to the interest disallowed to be treated as invested capital.

While the arbitrary limitations to which I have referred, and which are now fortunately removed, were blemishes on the earlier acts, criticism of the methods of determining taxable income established by those acts must be directed mainly at their lack of precision and clarity and their failure to recognize business methods and considerations of practical convenience.

Bases of Accounting for Income Historically Considered

It is perhaps not surprising that at the outset receipt or payment in cash should have been adopted as the general basis for inclusion of items in income-tax returns. Legislation is framed and interpreted largely by lawyers, and lawyers apparently seek to atone for the bewildering complexities they have introduced into their own sphere of activity by insisting on the utmost simplicity in other spheres. The legal mind that distrusts simple interest and regards compound interest as wholly pernicious is naturally suspicious of any account more complex than a cash account. In Great Britain, the home of the income tax, this tendency has been manifest, but in regard to commercial income it has been counteracted by another principle of judicial action, the principle that in commercial affairs the established practices of business men are a better guide than rules framed by theorists. Consequently the courts there have always held that the determination of income from business was a business problem, and that in the absence of express statutory provision to the contrary, established trade practices must be followed even though to the revenue authorities or even the court those practices might seem theoretically unsound or illogical.

An excellent illustration is found in the methods of valuing inventories, the English courts having sustained both the "cost or market" basis and the "basic stock" method where a practice in the trade was shown to exist and there was no statutory prohibition.

In our case, however, the tendency toward the cash basis was perhaps strengthened by the accident that our first income tax was enacted in the guise of an excise tax.

The law of 1909 was framed so as to provide that corporations should return income actually received and expenses actually paid. As soon as this became known the accountants vigorously protested to the attorney general that such a basis ignored the nature and practices of modern business and would entail inconvenience that would be more burdensome than the tax. The attorney general, however, remained unmoved by their protest, said that the straight cash basis was adopted advisedly and retorted that he had too much confidence in the ability of the accountants to think that they would find the difficulties of complying with the law unsurmountable.

The attorney general's confidence was apparently justified, for with the assistance of accountants the secretary of the treasury issued regulations which certainly presented no special difficulties to taxpayers.

Some have thought that the authors of those regulations found their inspiration where so many others have found inspiration, in the works of W. S. Gilbert. Certainly when one reads the provisions to the effect that the term "actually paid" does not necessarily contemplate that there shall have been an actual disbursement of cash or even its equivalent and that an item is paid as soon as a taxpayer recognizes that it has to be paid, one is irresistibly reminded of Koko's explanation to the Mikado of his statement that Nanki Poo had been executed when in fact he was still alive.

"When your Majesty says, 'let a thing be done,' it's as good as done,—practically it is done,—because your Majesty's will is law. Your Majesty says, 'Kill a gentleman,' and a gentleman is told off to be killed. Consequently, that gentleman is as good as dead, practically, he *is* dead, and if he is dead, why not say so?"

It is, however, quite possible to find a more logical justification for the method of determining net income established by the regulations at least in the main, though this justification, I admit, does not extend to the language in which the method is prescribed and ostensibly justified.

The act of 1909 provided that the "net income" which was subjected to tax should be determined by deducting "from the gross amount of the income—received within the year from all sources."

First. "All the ordinary and necessary expenses paid within the year out of income in the maintenance and operation of its business and properties including all charges such as rentals or franchise payments required to be made as a condition to the continued use or possession of property."

Second. "All losses actually sustained within the year and not compensated by insurance or otherwise, including a reasonable allowance for depreciation of property if any."

Third. "Interest actually paid within the year" subject to specified limits.

Fourth. All sums paid within the year for taxes.

Fifth. Dividends from other companies subject to the tax.

The regulations regarding commercial income apparently ignored the word "received" just as fully as the word "paid." It was not necessary that proceeds of sale should have been received in order that there should be taxable income therefrom. The regulation treated income from sales as received when the goods were exchanged for an account or note receivable or cash. This was, in ordinary cases, an obviously convenient rule (and in considering the almost complete acquiescence these regulations secured it must always be borne in mind that the tax was so small as to make it not worth while to fight a reasonably convenient rule) but whether if challenged it would have been sustained is open to question.

The courts have pointed out that the expectation of gain in the future is not present income and have been reluctant to sustain a tax where nothing had been received out of which the tax could be paid. The justification of the regulation would have had to be found in the argument that something equivalent to cash had been received, and in many classes of transactions the recognition of the principle of cash equivalence must be conceded to be practically essential to an effective income-tax administration. Once this principle is adopted, however, it has to be admitted that in measuring the gain the proceeds must be reduced to a true cash equivalent.

This would mean bringing provisions for the cost of collection, for discounts and for credit risks into account at the same time as the sale itself, which it may be noted the regulations did not permit.

The next point to be observed is that the proceeds of sale are not income (*Doyle v. Mitchell*); only so much as is gain is income. Assuming therefore that the gain is received when the proceeds of sale are received (not necessarily in cash) it follows that all costs attributable to the sale must be brought into account at the same time as the sale itself, whether such costs have or have not been paid. Otherwise on balance something which is not gain will inevitably have been brought into account and taxed as income. It is generally recognized that this is true of the direct cost of the goods sold, but it is not so universally understood that it is equally true of the cost of making the sale and the cost of collecting the proceeds. A commission paid in order to effect a sale is as much an element in determining the gain therefrom as the cost of the property sold. This point seems to me to have most important bearing on the determination of taxable income whether the question be approached from the theoretical, historical, or practical standpoint.

In considering the proper treatment of any item in relation to taxable income the first essential is to decide whether it properly relates to the determination of gross income or to a deduction from gross income. If the former, its treatment is not in any way affected by any limitations of deductions to amounts paid, accrued or incurred, as the case may be, since these limitations apply only to items which are *in fact* charges against gross income after gross income has been determined. As the court indicated in *Doyle v. Mitchell* it is immaterial whether there is any express provision allowing elements in the production of gross income as deductions from gross proceeds for until they are deducted there is nothing ascertained which Congress can properly tax as income.

This principle would have warranted a regulation that all costs of effecting sales, as well as the costs of producing the goods sold and provisions for the costs of collection, were allowable in the period in which the sales were returned, as a part of the computation of gross income. Only expenses not falling under any of these three heads would have been left to be taken as deductions under the head of "ordinary and necessary expenses actually paid within the year out of income."

Looking back on the problem of 1909 in the flood of light which the developments of the last sixteen years have thrown on the subject one feels that along such lines a solution might have been found that would have been almost as convenient as the one adopted and would have avoided interpreting the words "actually paid" in the Gilbertian manner of the regulation then promulgated. It may be suggested that the language of the provision for deduction of business expenses stood in the way, but this does not seem to be necessarily so. That provision authorized the "deducting from the gross amount of the income all the ordinary and necessary expenses actually paid within the year *out of income*." Expenditures necessarily made to produce income surely did not fall in any such category. In point of fact expenses of maintenance of the property of the taxpayer were specifically enumerated in the act among the "ordinary and necessary expenses," yet the regulations provided that expenditures for maintenance of manufacturing plant should be included in cost of goods sold in computing gross income and not under the deduction.

The regulations of 1909 did not follow the course I have suggested but treated only cost of goods as a deduction from sales in determining gross income and dealt with cost of selling and collection as "ordinary or necessary expenses" to be deducted from gross income when "actually paid," providing, however, that when such items were duly set up in the books they were "actually paid" within the meaning of the law.

The convenience of the solution is undeniable and it may be that the framers were governed by this consideration. They may well have felt that the solution was so convenient that no one would be likely to challenge it, and that if it were challenged they could readily show that it produced erroneous results only as regards expenses which were not a part of the cost of effecting and collecting the sales returned, the amount of which was in ordinary cases relatively insignificant.

In substance these regulations were sound, convenient, and did little real violence to the language of the law. Their form, however, must be admitted to have been defective, particularly in its apparent disregard of the language of the law. No doubt if continued interest in the work of administering the law by men of the quality of those who framed the regulations could have been secured, the defects in form would have been corrected, while the advantages of the substance would have been retained. This, however, was not possible and in the event just the opposite result followed. The influence of the defective form has continued long after the advantages derived from the substance have ceased to be felt.

One result of the defective form was that a widespread feeling was created both within and without the department that the regulations were at variance with the law and that any day dissatisfaction with their operation in a particular case might bring the issue into court and cause the whole house of cards to collapse. Another result was that the average taxpayer who was told that when used in connection with expenses the word "paid" did not necessarily mean a disbursement in cash, but that when used in relation to interest or taxes it did contemplate such a disbursement, felt that the law was unreasonable and so far as he was concerned, incomprehensible. Still another result, certainly of a most unexpected character, which I shall discuss later in this paper, grew out of the establishment by the regulations of the making of book entries as a criterion of deductibility, a criterion not warranted, either in theory or in the language of the law.

Further, while the solution by the secretary of the treasury of the problem presented in the act of 1909 produced immediate benefits in the form of convenience, it stood in the way of efforts to secure a more satisfactory wording when in 1913 the first income-tax law was enacted. Efforts to secure an improvement were made by, among others, the American Association of Public Accountants. The suggestion of a change was met with the argument that the existing law had in practice worked quite satisfactorily and that if such a law could be applied to corporations there was even greater justification for applying it to individuals, most of whom would keep no books and would make returns on a purely cash basis. The law of 1913 thus followed closely the language of the law of 1909. The efforts were, however, continued and in 1916 a modification was effected and taxpayers were given the option of making returns either on the statutory basis or on the basis on which their books were kept, provided the method of keeping the books was such as in the opinion of the commissioner correctly reflected income. For various reasons, which it is hardly necessary at this time to discuss, this provision did not work very well, and the regulations under the 1916 act continued to follow very closely those made under the acts of 1909 and 1913.

In passing it may be pointed out that Article 126 of Regulations No. 33, issued January 2, 1918, strongly suggests that at the time those regulations were issued, the line of reasoning, which I have put forward above, as an alternative to that indicated by the language of the 1909 regulations, had developed in the bureau. It begins by apparently flouting the language of the statute in the

most open and flagrant manner. The first sentence read 'paid' or 'actually paid' within the meaning of this title, does not necessarily contemplate that there shall be an actual disbursement in cash *or its equivalent*. The next sentence, however, states very succinctly the underlying justification of the results of the regulation which I have suggested. "If the amount involved represents an actual *expense or element of cost in the production of the income* of the year, it will be properly deductible even though not actually disbursed in cash, provided it is so entered upon the books of the company as to constitute a liability against its assets, and provided further that the income is also returned upon an accrued basis."

It will be observed that this regulation does not in terms permit the deduction of any expense which has not actually been paid unless it is "an expense or element of cost in the production of the income." To support such a position it was not necessary to give a forced construction to the words "actually paid" used in the statute. In practice, however, the regulation was applied to all business expenses and the bureau no doubt preferred to retain substantially the language of the regulations under the acts of 1909 and 1913 and to be in a position to invoke the rule that reenactment of the provisions of an act by Congress with a knowledge of the way in which it has been interpreted sanctions that interpretation.

When in 1917 the excess-profits-tax law was passed levying high taxes on the income determined under the 1916 law and regulations the whole question assumed new importance and the need for revision of the law became apparent.

In the 1918 law, therefore, it was provided (in section 212) that returns should be made on the basis on which the taxpayer's books were kept unless that basis did not clearly reflect income, in which case returns were to be made on such basis as the commissioner might prescribe as clearly reflecting income.

In considering this section it is important to bear in mind the provisions of the act that the terms paid or incurred (used in relation to deductions for expenses) and paid or accrued (used in relation to deductions for interest and taxes) should be construed according to the method of accounting used in computing net income.

Even more important, however, is the provision that items of gross income were to be included in returns for the taxable year in which received unless under methods of accounting permitted under section 212 they were properly accounted for as of a different period.

The intent seems clear to give the fullest effect to sound accounting practice in the determination of gross income. It may be conceded that the law gave no authority to the commissioner to prescribe or permit bases of accounting which would result in deductions from the gross income of expenses in periods other than those in which they were paid or incurred or of interest and taxes in periods other than that of payment or accrual. Incurred, however, is a sufficiently broad term and no serious criticism of the rules thus established could be offered by the most ardent advocate of the policy of allowing commercial practice to govern the determination of commercial income. The law certainly authorized the acceptance of well-established practices for determining gross income on the basis of the fair present value of the sales price, instead of its face value, in other words the exclusion from the computation of gross income of so much of the nominal sale price as might be necessary to provide for discounts, for the credit risk assumed and the cost of collecting that sale price. It did not permit deduction from gross income of reserves for potential future losses nor for expenditures not yet incurred and not involved in the production of the gross sales reported. From the legislative standpoint such deductions could not reasonably be allowed, however, legitimate or even praiseworthy purely precautionary reserves may be from the standpoints of sound finance and business prudence.

To most accountants the act of 1918 seemed to dispose of the vitally important question of accounting bases for determining taxable income in a sound and satisfactory way.

It can hardly be said that the expectations entertained have been fully realized. The regulations (reg. 45) seemed to observe the spirit as well as the letter of the law. Article 23, for instance, provided that "approved standard methods of accounting will ordinarily be regarded as clearly reflecting income" and article 24 said "the law contemplates that each taxpayer shall adopt such forms and systems of accounting as are in his judgment best suited to his purpose." In such articles as 151 the propriety of computing gross income upon the basis of the cash equivalent rather than the face value of credit sales was recognized. Other articles explicitly recognized approved alternative methods of treating expenditures in the twilight zone between obviously capital expenditures and ordinary operating expense. In administration the law has frequently been construed with less breadth and with less regard for its spirit. In part this is perhaps attributable to failure to recognize the nature of the problem of determining the income of a single year.

Accountants realize that income cannot with even approximate accuracy be allocated to a particular year, especially in the case of tax-payers carrying on an extensive and complex business. No year is sufficient unto itself—each year's operations are bound up with and dependent on the operations of earlier and later years. Consequently, any attribution of income to a single year in such cases must at best be no more than a very rough approximation based on accepted conventions. Many, however, who have not had much experience in such matters look on the income of a year as a very definite, significant and even a precise thing. They are reluctant to accept the proposition that there can be two ways of determining the income of a given year, which will give substantially different results and be equally admissible and correct. Experience suggests that such reluctance was very general among those in the bureau of internal revenue and when the 1918 act compelled recognition of the principle that there might be more than one legally correct way of computing income for a given year, they apparently resolved at least to limit the number of alternatives. Since the passage of the 1918 act the correspondence and briefs of the bureau have contained constant references to the *two* bases of accounting permitted under the act, these two being described respectively as "the cash basis" and "the accrual basis." Of course, the more experienced members of the bureau realized that there were far more than two bases of accounting possible and recognized under the act, and doubtless many of those who spoke of *the* cash basis and *the* accrual basis used the latter term generically to describe anything other than a cash basis. But to a large number of the employees of the bureau *the accrual basis* has become not merely a significant phrase, but an article of faith. Indeed, one can almost imagine such employees of the bureau scattered over the land turning their faces towards the treasury daily at the appointed hour and reciting their creed, "There is but one accrual basis and the Bureau is its prophet."

The Accrual Basis

It may be worth while to inquire just what is meant by "the accrual basis." This is by no means clear nor is it even clear precisely how it differs from the so-called cash basis as applied to commercial income since 1909.

It will be evident from what I have already said that both in theory and in practice cash has very little to do (in the case of commercial enterprises) with the determination of income on the "cash" basis and very little reflection is necessary to a realization of the fact that accruals (in any proper sense of the word) have still less to do with the determination of income on the so-called accrual basis. This fact has been obscured by the practice, which has grown up, of using the word "accrue" in senses hardly dreamed of before the revenue act of 1916 was passed. The bureau, having adopted "the accrual basis" as the only alternative to "the cash basis," has proceeded to term "an accrual" almost everything that is not a cash item. Thus, we find the bureau speaking of taking up an

inventory as an accrual and of "accruing accounts receivable from sales" and quite generally using the word "accrue" in a transitive sense as being equivalent to the "setting up on the books" which as I have pointed out was under the regulations of 1909 established as being for tax purposes equivalent to actual payment. Applying Euclidean methods, we may deduce that since setting up on the books is equivalent to actual payment of receipt and is also equivalent to accrual, and since things which are equal to the same thing are equal to one another, accrual is equivalent to actual payment or receipts and the cash basis and the accrual are identical. Such use of the word "accrual" could not have been justified from the dictionary nor from common accounting or business practice. Indeed the latest citation in any standard dictionary of the use of the word "accrue" in any transitive sense whatever, that I have been able to discover, is from a work published in 1594.

The fact is that the word "accrue" is a singularly unhappy choice for use in income-tax practice. One of the great difficulties of income taxation is that income-earning is a gradual process and yet the necessities of taxation require that particular portions of income shall be attributed to particular moments in time. It is not feasible to tax income during the period of growth but only when it becomes definite and measurable. Now in its basic meanings, the word "accrual" is ambiguous when applied to such a situation because one of its meanings is to "grow up" and the other is to "spring up" or "fall in," so that it is equally capable of application either to the period of growth or to the moment of falling in of income when it takes a definite form. There is a similar ambiguity in the legal and commercial uses of the word. When the term "accrue" is used in regard to interest, the reference is usually intended to be to the gradual accumulation of interest between one maturity date and another. In regard to taxes, it has repeatedly been held to mean "become due." The use of the word in the recent acts has been sufficiently confusing in that the two deductions in respect to which it has been used in the acts are interest and taxes, two items in relation to which it has quite different meanings. When to such ambiguities is added the further confusion arising from use of the word by the bureau in the transitive sense as equivalent to "set up", its last shred of descriptive value disappears.

One may wonder why of all the terms used in the acts this term, which is the least illuminating, should have attained the widest use in the bureau. Partly, no doubt, it is due to the fact that of the various terms used such as "paid," "received," and "incurred," "accrued" is the only one from which an adjective is easily formed that is applicable to both sides of the account. Its use therefore achieved brevity, though at a complete sacrifice of significance. However this may be, I venture to suggest that the mis-use of the word "accrue" has contributed to the confusion of the income-tax administration in the latter stages as much as the artificial solution of the problem presented by the words "paid" and "received" in the act of 1909 occasioned in the earlier stages.

Before leaving the subject, I would like to admit that the accountants are not wholly without responsibility for the confusion that has existed. Our own use of terminology is lamentably inconsistent and reflects too often the idiosyncracies of the individual rather than the established practice of the profession. I recall a statement put forward over the signature of a well known accounting firm which began with a figure described as "gross income" from which allowances and refunds were deducted to arrive at a figure described as "net gross income." Operating expenses were next deducted and the result described as "net operating income"; the addition to which of net income from other sources produced a so-called "gross net income" which it must be observed meant something quite different from "net gross income". Our treatment of cost of goods, cost of selling and cost of collecting in relation to gross income has too often been determined by habit rather than by logic. Many of us have acquiesced in or even adopted the bureau's unwarranted usage of "the accrual basis." Burdened with so much responsibility, we must be restrained in our criticisms of the bureau, which, facing a heavier task equipped with less experience, has fallen into errors similar to our own.

Conclusion

We may now, I hope, look forward to rates that will be lower and more stable than in recent years with a resulting reduction of the temptation to taxpayers to allow their accounting methods to be influenced by tax considerations. If so, there will be even more reason than in the past why the bureau should carry out the obvious intent of the law and adopt a broad policy towards taxpayers' accounting methods, which will make the law less burdensome in procedure as well as in amount.

In order to accomplish this result some old misconceptions need to be removed and some old truths emphasized anew. It would greatly improve the administration of the income tax if the bureau generally—not merely those who frame regulations but all charged with the administration of the law—would realize that "the accrual basis" is a meaningless phrase; that the choice today is not between a so-called "cash basis" and a so-called "accrual basis" but between the basis on which the taxpayers' books are kept and the basis prescribed by the commissioner as clearly reflecting income; and that as stated in regulations 45, article 24, the law contemplates that "each taxpayer shall adopt such forms and systems of accounting as are in his judgment best suited to his purpose."

They should keep constantly in mind the fundamental difference between the considerations governing the determination of gross income and those governing the treatment of authorized deductions from such gross income. In this connection they should realize that the mention of any class of items among the authorized deductions from gross income does not stand in the way of the deduction of similar items from gross proceeds in the determination of gross income where they are a part of the cost of producing that income.

For instance, the provisions that taxes may be deducted either when paid or when accrued does not stand in the way of customs duties accrued and paid last year entering into the determination of the income of this year if the goods imported are sold this year. Similarly the provision that debts actually ascertained to be worthless may be claimed as deductions does not stand in the way of valuing sales accounts receivable at their fair market value at the time when they are created, in determining the gross income from such sales, but merely limits the deduction which may subsequently be claimed for bad debts if the account receivable proves uncollectable.

They should never forget that income is at best a matter of estimate and opinion, and that in its allocation in respect of time, business practice and the treatment adopted in good faith by the taxpayer are entitled to great weight; also that the injustice of taxation of income which has not been received may not be adequately remedied by allowing the amount as a so-called loss against the income from other transactions in a later year. Both the law and business practice warrant conservatism in determining when income is received and is taxable.

There are the practical conclusions which seem to me to emerge from consideration on our subject.

Denver Boys Conduct Waste Paper Company

DENVER, Col., October 9, 1925.—Boys ranging in age from nine into their early teens constitute the Highland Boys Paper Company, of Denver, Colorado. The "product" of the concern is that of gathering waste paper from every nook and corner of the city and then selling it to the Colorado Paper Company, formerly the Myers Pulp and Paper Company, and the Highland is making money. Not only have they established headquarters at 1608 Broadway but they have their own telephone, and all orders are attended to with promptness and courtesy.

The Highland boys are members of the Olinger Highlanders, the band gotten together by George Olinger, prominent realtor of Denver who says that "A boy is the greatest thing in the world".

Imports of Paper and Paper Stock

NEW YORK, BOSTON, PHILADELPHIA AND OTHER PORTS

NEW YORK IMPORTS

WEEK ENDING OCTOBER 17, 1925

SUMMARY

News print	4,595 rolls
Printing paper	111 bls., 43 cs., 17 rolls
Cigarette paper	32 cs.
Wall paper	8 bls., 4 cs.
Paper hangings	12 bls., 4 cs.
Wrapping paper	125 bls., 18 cs., 11 bdls.
Packing paper	529 bls., 161 cs.
Decalcomania paper	6 cs.
Fancy paper	2 cs.
Metal coated paper	16 cs.
Metal paper	5 cs.
Surface coated paper	188 cs.
Gold coated paper	126 cs.
Basic paper	58 cs.
Colored paper	34 cs.
Tissue paper	15 cs.
Test paper	2 cs.
Filter paper	13 cs.
Drawing paper	5 cs.
Cover paper	4 cs.
Paint paper	9 cs.
Writing paper	3 cs.
Silk paper	2 cs.
Straw board	175 rolls, 200 pgs.
Carton paper	19 pgs.
Bible paper and books	5 cs.
Miscellaneous paper	730 bls., 113 cs.

CIGARETTE PAPER

Standard Products Corp., Suffren, Havre, 22 cs.
P. J. Schweitzer, Paris, Havre, 9 cs.
Rose & Frank, Britannia, Marseilles, 1 cs.

WALL PAPER

A. C. Dodman, Jr., Inc., Cedric, Liverpool, 1 ble.
F. J. Emmerich, American Banker, London, 1 ble.
A. C. Dodman, Jr., Inc., Homeric, Southampton, 6 bls.
A. C. Dodman, Jr., Inc., Homeric, Southampton, 3 cs.
J. C. Robold & Co., Aquitania, Southampton, 1 cs.

PAPER HANGINGS

W. H. S. Lloyd & Co., Minnekahda, London, 12 bls.
W. H. S. Lloyd & Co., Minnekahda, London, 4 cs.

NEWS PRINT

Newfoundland Export & Shipping Co., Humber Arm, Corner Brook, N. F., 2218 rolls.
Parsons & Whittemore, Inc., Muenchen, Bremen, 672 rolls.
Parsons & Whittemore, Inc., Casper, Kotka, 1100 rolls.
Norwegian Paper Mills Agency, Inc., Bergensfjord, Fredrikshald, 605 rolls.

PRINTING PAPER

Republic Bag & Paper Co., Yone Maru, Hamburg, 29 bls.
B. F. Drakenfeld & Co., Cedric, Liverpool, 15 cs.
Maurice O'Meara Co., Muenchen, Bremen, 35 bls.
Perkins, Goodwin & Co., Thuringia, Hamburg, 17 rolls.
Japan Paper Co., Aquitania, Southampton, 2 cs.
Titan Shipping Co., Aquitania, Havre, 26 cs.
Japan Paper Co., Rotterdam, Rotterdam, 47 bls

WRAPPING PAPER

Blauvelt-Wiley Paper Manfg. Co., Caledonia, Glasgow, 11 bdls.
E. Dietzgen & Co., Ryndam, Rotterdam, 8 cs.
E. L. Garvin, Belgenland, Antwerp, 4 cs.
National City Bank, Thuringia, Hamburg, 125 bls.
E. Dietzgen & Co., Rotterdam, Rotterdam, 6 cs.

PACKING PAPER

Wilkinson Bros. & Co., Inc., Ryndam, Rotterdam, 111 bls.
Wilkinson Bros. & Co., Inc., Ryndam, Rotterdam, 130 cs.
International Forwarding Co., Ryndam, Rotterdam, 31 cs.
Merchants Products Co., Thuringia, Hamburg, 400 bls.
J. P. Hefernan Paper Co., Resolute, Hamburg, 18 bls.

DECALCOMANIA PAPER

Phoenix Shipping Co., Republic, Bremen, 6 cs.

FANCY PAPER

Whiting & Patterson Co., Aquitania, London, 2 cs.

METAL COATED PAPER

C. B. Richard Co., Republic, Bremen, 4 cs.
C. B. Richards Co., Resolute, Hamburg, 2 cs.
Hensel, Bruckman & Lorbacher, Thuringia, Hamburg, 10 cs.

METAL PAPER

Hensel, Bruckman & Lorbacher, Resolute, Hamburg, 5 cs.

SURFACE COATED PAPER

P. C. Zuhlke, Belgenland, Antwerp, 75 cs.
Gevaert Co. of America, Belgenland, Antwerp, 62 cs.
Phoenix Shipping Co., Belgenland, Antwerp, 49 cs.
Whiting & Patterson & Co., Resolute, Hamburg, 2 cs.

GOLD COATED PAPER

Globe Shipping Co., Muenchen, Bremen, 126 cs.

BASIC PAPER

Globe Shipping Co., Belgenland, Antwerp, 58 cs.

COLORED PAPER

Borden Riley Paper Co., Belgenland, Antwerp, 7 cs.
E. Dietzgen & Co., Thuringia, Hamburg, 27 cs.

TISSUE PAPER

F. C. Strype, Carmania, Liverpool, 15 cs.

TEST PAPER

Johnson & Sons, Minnekahda, London, 2 cs.

FILTER PAPER

H. Reeve Angel & Co., Inc., Minnekahda, London, 6 cs.
C. Schleicher Schull Co., Thuringia, Hamburg, 7 cs.

DRAWING PAPER

Favor Ruhl & Co., Minnekahda, London, 5 cs.

COVER PAPER

International Forwarding Co., Thuringia, Hamburg, 4 cs.

PAINT PAPER

A. C. Dodman, Jr., Inc., Paris, Havre, 8 cs.
C. Grimmer & Son, Paris, Havre, 1 cs.

WRITING PAPER

J. P. Morgan & Co., Homeric, London, 1 cs.
Halle Bros. & Co., Liberty, Havre, 2 cs.

SILK PAPER

S. Gilbert, Ryndam, Rotterdam, 2 cs.

STRAW BOARD

A. J. Zabriskie, Ryndam, Rotterdam, 200 pgs.
A. Vuyck, Rotterdam, Rotterdam, 173 rolls.

CARTON PAPER

S. Stern, Minnekahda, London, 19 pgs.

BIBLE PAPER AND BOOKS

J. Pott & Co., Aquitania, Southampton, 5 cs.

PAPER

F. C. Strype, Ryndam, Rotterdam, 13 cs.
P. H. Petry & Co., Tomalva, Rotterdam, 6 cs.
Hensel, Bruckman & Lorbacher, Suffren, Havre, 2 cs.
W. F. Collins Co., Suffren, Havre, 6 cs.
E. & H. Levy, Paris, Havre, 2 cs.
Standard Products Corp., Paris, Havre, 17 cs.
H. de Maguinn, Paris, Havre, 18 cs.
P. H. Petry & Co., Paris, Havre, 16 cs.
Guibout freres, Paris, Havre, 9 cs.
F. & R. Trading Co., West Arrow, Antwerp, 730 bls.
K. H. Schmidt, Rotterdam, Rotterdam, 4 cs.
J. I. Bernitz, Rotterdam, Rotterdam, 20 cs.

RAGS, BAGGINGS, ETC.

Brown Bros. & Co., Caledonia, Glasgow, 39 bls. rags.
State Bank, Caledonia, Glasgow, 58 bls. rags.
A. W. Fenton, Inc., Caledonia, Glasgow, 50 bls. bagging.
E. J. Keller Co., Inc., Ryndam, Rotterdam, 76 bls. rags.
E. J. Keller Co., Inc., Ryndam, Amsterdam, 43 bls. rags.
E. J. Keller Co., Inc., Ryndam, Amsterdam, 87 bls. bagging.
Darmstadt, Scott & Courtney, Ryndam, Rotterdam, 34 bls. bagging.
The Barret Co., Ryndam, Rotterdam, 63 bls. rags.
Mechanics & Metals National Bank, Ryndam, Rotterdam, 61 bls. rags.
A. W. Fenton, Inc., Yone Maru, Hamburg, 544 bls. rags.
A. W. Fenton, Inc., Yone Maru, Hamburg, 80 bls. bagging.
Chemical National Bank, Yone Maru, Hamburg, 70 bls. rags.
American Woolstock Corp., Yone Maru, Hamburg, 59 bls. rags.
Castle & Overton, Inc., Tomalva, Rotterdam, 45 bls. rags.
G. M. Graves Co., London Exchange, London, 23 bls. rags.
E. Butterworth & Co., Inc., Cedric, Liverpool, 35 bls. bagging.
Salomon Bros. & Co., Cabo Espartel, Marseilles, 69 bls. rags.
Brown Bros. & Co., Verbania, London, 35 bls. new cuttings.
E. J. Keller Co., Inc., Verbania, London, 185 bls. rags and baggings.
Brown Bros. & Co., Nubian, Manchester, 91 bls. rags.
Amsinck, Sonne & Co., Inc., Nubian, Manchester, 22 bls. rags.
J. Cohen Son & Co., Nubian, Manchester, 13 bls. rags.
A. W. Fenton, Inc., Nubian, Manchester, 313 bls. rags.
E. Butterworth & Co., Inc., Nubian, Manchester, 365 bls. bagging.
B. D. Kaplan, Carmania, Liverpool, 32 bls. rags.
Chemical National Bank, Muenchen, Bremen, 142 bls. rags.
A. W. Fenton, Inc., Muenchen, Bremen, 90 bls. bagging.
Ideal Manufacturers Supply Co., West Arrow, Antwerp, 28 bls. new cuttings.

E. J. Keller Co., Inc., West Arrow, Antwerp, 39 bls. rags.

Brown Bros. & Co., West Arrow, Antwerp, 471 bls. rags.

Chemical National Bank, Thuringia, Hamburg, 224 bls. rags.

A. W. Fenton, Inc., Thuringia, Hamburg, 61 bls. rags.

L. H. Abenheimer, Thuringia, Hamburg, 94 bls. rags.

Brown Bros. & Co., Thuringia, Hamburg, 299 bls. rags.

E. J. Keller Co., Inc., Thuringia, Hamburg, 89 bls. new cuttings.

A. W. Fenton, Inc., Carlier, Antwerp, 203 bls. rags.

Chemical National Bank, Carlier, Antwerp, 392 bls. rags.

Atterbury Bros., Inc., Liberty, Havre, 18 bls. rags.

Atterbury Bros., Inc., Liberty, Havre, 102 bls. bagging.

G. Straus, Liberty, Havre, 6 bls. rags.

J. Jaffe, Liberty, Havre, 114 bls. rags.

S. Birkenstein & Sons, Liberty, Havre, 48 bls. rags.

Castle & Overton, Inc., Liberty, Havre, 205 bls. bagging.

Castle & Overton, Inc., Liberty, Dunkirk, 300 bls. rags.

The Stone Bros. Co., Inc., Liberty, Dunkirk, 23 bls. rags.

Salomon Bros. & Co., Liberty, Dunkirk, 41 bls. bagging.

Darmstadt, Scott & Courtney, Liberty, Dunkirk, 28 bls. bagging.

Atlas Waste Manfg. Co., Liberty, Dunkirk, 137 bls. rags.

E. J. Keller Co., Inc., Virginian, Kobe, 350 bls. rags.

E. J. Keller Co., Inc., A. Ballin, Hamburg, 54 bls. bagging.

E. J. Keller Co., Inc., Hellig Olav, Copenhagen, 113 bls. bagging.

E. J. Keller Co., Inc., Hellig Olav, Copenhagen, 337 bls. rags.

E. J. Keller Co., Inc., Vincent, Havre, 25 bls. jute cuttings.

E. J. Keller Co., Inc., Winona, Algiers, 282 bls. rags.

Castle & Overton, Inc., Andania, Hamburg, 165 bls. bagging.

Castle & Overton, Inc., A. Ballin, Hamburg, 31 bls. rags.

Castle & Overton, Inc., Sinaia, Egypt, 196 bls. rags.

OLD ROPE

Brown Bros. & Co., Ryndam, Rotterdam, 69 coils.

Brown Bros. & Co., Belgenland, Antwerp, 115 bls.

MANILA ROPE

Ellerman's Wilson Line, Minnekahda, London, 35 coils.

WOOD PULP

W. Hartman & Co., Inc., Yone Maru, Hamburg, 321 bls. wood pulp, 49 tons.

Ira L. Beebe & Co., Inc., Muenchen, Bremen, 600 bls. wood pulp.

Castle & Overton, Inc., Muenchen, Bremen, 960 bls. wood pulp.

Johanson, Wales & Sparre, Inc., Casper, Hernosand, 780 bls. sulphate pulp, 130 tons.

E. M. Sergeant & Co., Bergensfjord, Oslo, 475 bls. chemical pulp.

The Borregaard Co., Inc., Bergensfjord, Sarpsborg, 300 bls. sulphite pulp.

WOOD FLOUR

A. Kramer & Co., Inc., Ryndam, Rotterdam, 400 bags.

The Hansa Co., Anaconda, Rotterdam, 500 bags, 25,375 kilos.

The Hansa Co., Tomalva, Rotterdam, 500 bags, 25,375 kilos.

The Bakelite Corp., Tomalva, Rotterdam, 829 bags, 49,790 kilos.

B. L. Soberski, Bergensfjord, Fredrikstad, 1755 bags.

CASEIN

Atterbury Bros., Inc., Bruyere, Buenos Aires, 334 bags.

Allidinite Chemical Co., Westphalia, Hamburg, 261 bags.

The Kalbfleisch Corp., American Legion, Buenos Aires, 667 bags.

BALTIMORE IMPORTS

WEEK ENDING OCTOBER 17, 1925

Pagel, Horton & Co., Inc., Casper, Husum, 1200 bls. sulphate pulp, 200 tons.

Pagel, Horton & Co., Inc., Casper, Husum, 1116 bls. sulphite pulp, 136 tons.

Castle & Overton, Inc., West Harcuvar, Germany, 825 bls. wood pulp.

E. J. Keller Co., Inc., Binnendyk, Mannheim, 256 bls. wood pulp.

NORFOLK IMPORTS

WEEK ENDING OCTOBER 17, 1925

New York Trust Co., Yone Maru, Hamburg, 187 bls. rags.

New York Trust Co., Yone Maru, Hamburg, 121 bls. bagging.

Parsons & Whittemore, Inc., Casper, Kotka, 361 rolls newsprint paper.

PHILADELPHIA IMPORTS

WEEK ENDING OCTOBER 17, 1925

Stephano Bros., Liberty, Havre, 3 cs. cigarette paper.

Salomon Bros. & Co., Liberty, Havre, 168 bls. rags.

J. Jaffe, Liberty, Havre, 40 bls. rags.

J. M. Hagy Waste Works, Liberty, Dunkirk, 253 bls. rags.

E. J. Keller Co., Inc., Liberty, Dunkirk, 107 bls. rags.

Castle & Overton, Inc., Liberty, Dunkirk, 228 bls. rags.

E. J. Keller Co., Inc., Novian, Antwerp, 403 bls. rags.

Equitable Trust Co., London Exchange, London, 76 bls. waste paper.

Anglo-South American Trust Co., London Exchange, London, 113 bls. rags.

Old Colony Trust Co., London Exchange, London, 82 coils old rope.

Castle & Overton, Inc., Cabo Espartel, Valencia, 784 bls. rags.

E. J. Keller Co., Inc., Cabo Espartel, Marseilles, 34 bls. rags.

Salomon Bros. & Co., Cabo Espartel, Marseilles, 285 bls. rags.

A. W. Fenton, Inc., Cabo Espartel, Marseilles, 79 bls. rags.

The Stone Bros. Co., Inc., Cabo Espartel, 143 bls. rags.

S. Birkenstein & Sons, Cabo Espartel, Marseilles, 77 bls. rags.

E. J. Keller Co., Inc., West Arrow, Antwerp, 574 bls. rags.

E. J. Keller Co., Inc., West Arrow, Rotterdam, 136 bls. rags.

E. J. Keller Co., Inc., West Arrow, Rotterdam, 22 bls. carpets.

E. Butterworth & Co., Inc., West Arrow, Antwerp, 100 bls. flax waste.

Baltimore Trust Co., West Arrow, Antwerp, 296 bls. rags.

Baltimore Trust Co., West Arrow, Antwerp, 124 bls. bagging.

Market Street National Bank, West Arrow, Antwerp, 113 bls. rags.

D. I. Murphy, West Arrow, Antwerp, 218 bls. rags.

Castle & Overton, Inc., West Arrow, Antwerp, 364 bls. rags.

R. Blank, West Arrow, Antwerp, 596 bls. rags.

A. Hurst & Co., West Arrow, Antwerp, 70 bls. rags.

Salomon Bros. & Co., West Arrow, Antwerp, 388 bls. rags.

A. W. Fenton, Inc., West Arrow, Antwerp, 141 bls. rags.

Brown Bros. & Co., West Arrow, Antwerp, 214 bls. rags.

Brown Bros. & Co., West Arrow, Antwerp, 89 bls. bagging.

Maurice O'Meara Co., West Arrow, Antwerp, 61 bls. rags.

J. A. Steer & Co., West Arrow, Antwerp, 120 bls. rags.

Castle & Overton, Inc., Novian, Antwerp, 214 bls. rags.

Castle & Overton, Inc., Binnendyk, Rotterdam, 51 bls. rags.

Castle & Overton, Inc., Gorm, Denmark, 163 bls. rags.

Castle & Overton, Inc., Gorm, Denmark, 85 bls. old rope.

Castle & Overton, Inc., Gorm, Denmark, 214 coils old rope.

Castle & Overton, Inc., Caracoli, France, 47 bls. rags.

Castle & Overton, Inc., Eastern Dawn, Antwerp, 332 bls. rags.

Castle & Overton, Inc., Hameln, Bremen, 1267 bls. rags.

Castle & Overton, Inc., Clontarf, Italy, 30 bls. rags.

Castle & Overton, Inc., Isarco, Italy, 97 bls. rags.

E. J. Keller Co., Inc., Indep. Hall, St. Nazaire, 139 bls. rags.

E. J. Keller Co., Inc., Californian, Kobe, 50 bls. rags.

E. J. Keller Co., Inc., Binnendyk, Amsterdam, 103 bls. rags.

E. J. Keller Co., Inc., Binnendyk, Rotterdam, 50 bls. rags.

National City Bank, Satartia, Buenos Aires, 584 bags casein.

Castle & Overton, Inc., Mexicano, Norway, 500 bls. wood pulp.

Castle & Overton, Inc., ———, Germany, 2200 bls. wood pulp.

Castle & Overton, Inc., Carlsholm, Gothenburg, 203 bls. wood pulp.

BOSTON IMPORTS

WEEK ENDING OCTOBER 17, 1925

R. Blank, Yone Maru, Hamburg, 88 bls. rags.

E. Butterworth & Co., Inc., Yone Maru, Hamburg, 140 bls. rags.

G. M. Graves & Co., Yone Maru, Hamburg, 57 bls. rags.

Mechanics & Metals National Bank, Yone Maru, Hamburg, 142 bls. rags.

Fidelity International Trust Co., Yone Maru, Hamburg, 217 bls. rags.

Ira L. Beebe & Co., Inc., Yone Maru, Hamburg, 420 bls. wood pulp, 84 tons.

Hartig Pulp Co., Yone Maru, Hamburg, 300 bls. wood pulp, 62 tons.

Castle & Overton, Inc., Yone Maru, Hamburg, 280 bls. wood pulp, 56 tons.

Castle & Overton, Inc., ———, Germany, 840 bls. wood pulp.

E. J. Keller Co., Inc., Keifuku Maru, Hamburg, 86 bls. rags.

NEW ORLEANS IMPORTS

WEEK ENDING OCTOBER 17, 1925

Castle & Overton, Inc., Jeff Davis, England, 71 bls. sacking.

Castle & Overton, Inc., Jeff Davis, England, 121 bls. rags.

Castle & Overton, Inc., Gand, France, 1453 bls. rags.

Castle & Overton, Inc., Gand, France, 135 bls. waste paper.

Castle & Overton, Inc., Gand, France, 52 bls. bagging.

Castle & Overton, Inc., Coldbrook, France, 390 bls. rags.

Castle & Overton, Inc., Emergency Aid, Germany, 257 bls. rags.

Castle & Overton, Inc., Emergency Aid, France, 154 bls. rags.

E. J. Keller Co., Inc., Maryland, Havre, 80 bls. bagging.

E. J. Keller Co., Inc., Carplaka, Antwerp, 167 bls. rags.

Norwood

Mechanical Filtration Plants
Gravity and Pressure Types

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Florence, Mass., U. S. A.

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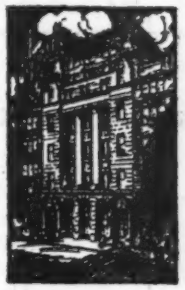

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Camden CLEAN SHEAR CUT CUT **New Jersey, U.S.A.**

Paper Slitters and Rewinders or Winders Paper Tube and Paper Can Machinery Corrugated Paper Machinery

Complete bulletins covering each line of equipment Yours for the asking

New York Market Review

Office of THE PAPER TRADE JOURNAL,
Wednesday, October 21, 1925.

General conditions in the local paper market are very healthy at present and a further expansion of business is confidently predicted in the near future. With the approach of the holiday season, the demand for the various grades of paper is steadily increasing and a good volume of inquiries are also being received by the manufacturers. Prices continue to be well maintained on a firm basis. Reports from the sales organizations of the leading paper houses are very encouraging and a spirit of optimism prevails throughout the industry.

The demand for news print continues to expand and spot business, in particular, is very active. A satisfactory amount of contract business is also being booked. Leading newspapers of the country are increasing the sizes of their publications and are consuming an enormous quantity of news print. Stocks are reported to be below normal and, as a result, prices are very firm. News print plants are operating at present well ahead of the rate a year ago but the greatly increased demand is taking care of all accumulations.

Box board orders are more prevalent than for some time past and spot supplies are in strong demand. Fine papers are in greater request and manufacturers are receiving a heavy volume of orders from the printers. A decided improvement is also noticed in the coarse paper market with indications of a further increase of business from now on, until the end of the holiday season.

Mechanical Pulp

The tone of the ground wood market continues very strong. Demand for spot supplies from the board and paper mills is broadening and prices are generally well maintained at the recently quoted basis. Shipments of mechanical pulp on contracts are heavy and stocks are said to be diminishing.

Chemical Pulp

The demand for chemical wood pulp shows no signs of lessening and the recent advances in the market are being well maintained. Kraft and bleached sulphate continue to be in great request. Stocks are reported to be limited and judging by the number of inquiries in the market, accumulations may soon be practically absorbed. Many consumers are said to be buying at a considerable period ahead in anticipation of a rising market. Incidentally, the market is likely to be influenced in the near future by the freezing of the Baltic and the cessation of shipments from Sweden.

Old Rope and Bagging

The old rope market is experiencing a satisfactory demand from the mills. Supplies now in the market are just about sufficient to take care of the orders being received. Bagging is moving steadily and the mill demand continues to be for the same grades as formerly. Dealers are reported to be securing somewhat higher prices in some instances. The market is expected to expand steadily from now on.

Rags

Domestic rags are in fair demand and prices are practically unchanged. The higher grades of foreign rags are very scarce due to heavier home consumption of the European mills. Prices of foreign rags are inclined to advance before long.

Waste Paper

The demand for waste paper continues to be quiet, but there are signs that the paper mills will be in the market for supplies in the near future to replenish their stocks, which are believed to be below normal. The bright feature in this market is the excellent demand for old kraft paper, and prices of this commodity have naturally increased.

Twine

Trading in the twine market continues to improve and prices are generally higher than for some time. With the approach of the holiday season a continued expansion is anticipated, and the outlook for the immediate future is all that could be desired.

May Advance Pacific States Paper Case

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., October 21, 1925.—Attorneys of the Federal Trade Commission intend to decide within the next few weeks whether or not they will ask the United States Supreme Court to advance the Commission's case against the Pacific States Paper Trade Association. This case is now on the docket of the Supreme Court, but in the regular course of events will not be reached for argument until the June session next spring, or perhaps until the October session in 1926. It is understood, however, that the Department of Justice has expressed considerable interest in this case and if conferences between attorneys of the Department and the Federal Trade Commission develop that this fact is so, advancement will be asked of the Court by the Commission.

American Tissue Mills to Build

[FROM OUR REGULAR CORRESPONDENT]

HOLYOKE, October 19, 1925.—The American Tissue Mills, Inc., has let the contract for a large brick one story addition to its Pearl City Division at South Hadley to Daniel O'Connell's Sons of this city for about $50,000. The new addition, work on which was begun at once, will be used as a combined filter and bleach house. It will be built of brick concrete and steel and by 80 x 110 feet in size.

G. L. Robinson Goes with Valley Paper Co.

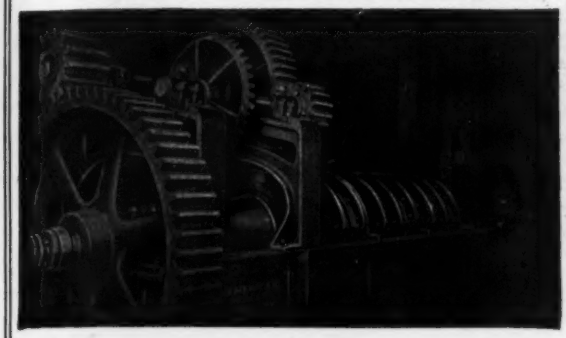
[FROM OUR REGULAR CORRESPONDENT]

HOLYOKE, October 19, 1925.—George L. Robinson who resigned recently as supt. of the Parsons Division of the American Writing Paper Company last week accepted the position of superintendent of the Valley Paper Company. Mr. Robinson's experience in mills making highest grades writing bond and ledger papers makes his acquisition by the Valley Paper Company valuable.

Chapin & Gould Co. Dedicate Addition

[FROM OUR REGULAR CORRESPONDENT]

HUNTINGTON, Mass., October 19, 1925.—The new brick addition to the Chapin & Gould Paper Company plant was dedicated Saturday night with an entertainment and dance. About three hundred employees, relatives and friends attended the affair. The addition will be used in connection with the enlargement of the company's loft dried paper department.



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FOR DEWATERING PULP

ADVANTAGES

1. AUTOMATIC—requiring a minimum of labor to operate.
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LOBDELL CALENDERS

Equipped with Electric Motor Lift, Hydraulic Lift or Ratchet Lift all operated from the floor.

Chilled Iron Rolls of all sizes

Grinding Machines

Micrometer Roll Calipers

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Wilmington, Del., U. S. A.

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Finest Grades of Agalite
147 Nassau Street New York

WALDRON MACHINES
FOR
EMBOSSING, COATING, PRINTING,
Machines for Processing Paper
Calenders, Winders & Slitters
Francke Flexible Couplings
JOHN WALDRON CORPORATION
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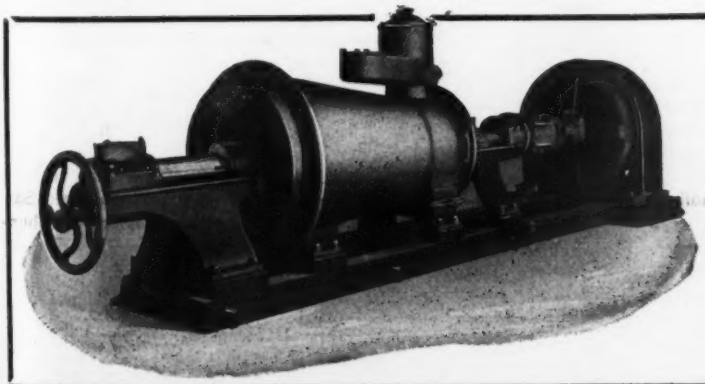

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Our latest Improved Machine, three sizes; belt or direct connected motor driven. All Bearings self-oiling, adjustable and water-cooled. Fitted with Standard Steel Knives, Special Heat Treated Steel, Bronze or Manganese Steel Plug and Shell Lining.

For full particulars apply to
DILLON MACHINE CO., Inc.
Builders of Paper Mill Machinery
Lawrence, Mass.

Miscellaneous Markets

Office of THE PAPER TRADE JOURNAL,
Wednesday, October 21, 1925.

During the past week the general tone of the chemical market continued strong and steady. Spot business for most materials was in good demand and a satisfactory volume of contract sales were also transacted. Stocks moved freely and contract withdrawals have been extremely good. Leading manufacturers are mostly reported to be well sold out until the end of the year.

BLANC FIXE.—The blanc fixe market continues normal, although inquiries for contract shipments are increasing. The demand for spot business at present is rather quiet. The prevailing quotations range from $60 to $70 a ton for the pulp, and from $80 to $100 for the powder.

BLEACHING POWDER.—The demand for bleaching powder continues to be active. Due to increased producing costs, the prices applying on spot sales for the balance of this year, and for contract deliveries over 1926, have been advanced to from $2.00 to $2.40 per 100 pounds, in large drums, at works.

CAUSTIC SODA.—The caustic soda market continues very steady. Contract withdrawals have been large, while accumulations are reported to be low. Some contract business has been renewed at the current basis. The price is still quoted at from $3.10 to $3.15 per 100 pounds, at works.

CASEIN.—There have been no important developments recently in the casein market. A fair amount of business, however, is being done. The prevailing quotation of from 13 to 14 cents a pound, in bags, is said to have been shaded in several instances.

CHINA CLAY.—Very little spot buying has developed lately in the china clay market, the bulk of the business being transacted consisting of shipments against standing orders. The prices on imported grades rule from $14.50 to $22.50 a ton, and the domestic grades at from $12 to $15 a ton.

CHLORINE.—The demand for chlorine is steadily improving and shipments, of late, have been very frequent. The contract price for the forthcoming year has been announced as 4 cents a pound in tanks or multi-unit cars at works.

ROSIN.—The feature of the rosin market is the fact that reduced supplies are facing world-wide needs. Offers of all grades are light and the market continues to rise. At the naval stores rosin is at present quoted at from $15.70 to $15.80, ship side, in barrels of 280 pounds.

SALT CAKE.—There has been a good inquiry and an active demand for salt since the beginning of the month and a great expansion of business is anticipated in the near future. The price is now quoted at from $16 to $20 a ton, in bulk, at works.

SODA ASH.—Production of soda ash is being well maintained in order to take care of the large demand being experienced for this material. Shipments against contracts have been in good volume lately. The quoted price is still from 1.38 to 1.63 cents a pound, in bulk, at works.

STARCH.—Due to the recent reactions in the grain markets, the leading refiners have been able to make more concessions to their customers recently. The rate for special paper starch is now quoted at $3.32 per 100 pounds, in bags, and $3.49 in barrels.

SULPHATE OF ALUMINA.—A broader demand for sulphate of alumina is being experienced from the paper industry with the result that shipments have increased heavily. The price continues to be quoted at from $1.40 to $1.50 per 100 pounds for commercial grades, and from $2.00 to $2.35 for the iron free.

SULPHUR.—The sulphur market continues along steady and active lines and shipments have been very satisfactory. Sulphur is still quoted at from $19 to $20 a ton, in bulk, ship side, and from $15 to $16 a ton, at mine.

TALC.—The talc market continues practically unchanged. Stocks are quite sufficient to take care of the prevailing demand. Quoted prices for talc remain firm at from $17 to $18 a ton, according to grade.

PHILADELPHIA DEMAND GROWS

(*Continued from page 30*)

two ordered for paper trade and is owned by the Newfoundland Export and Shipping Company, Ltd., a subsidiary of the Newfoundland Power and Paper Company, manufacturers of news print. Most of the present shipment was consigned to the local newspapers from the latter firm. This first of paper ships was constructed at Newcastle on Tyne and is of shelter deck type, 439 feet long, 65 feet beam, with deadweight tonnage of 8,915. Her summer draft is 27 feet.

For the protection of the paper cargo a specially elaborate system of ceiling and sparring is fitted and the upper 'tween deck stanchions are wrapped with jute rope. For handling the cargo are six matches and 18.9 by 12 inch steam winches, operating eighteen booms on the masts and eight derrick posts. It will burn either coal or oil and is equipped with a reciprocating engine of 3,500 horse power, giving a sea speed of 12 knots. The Humber Arms willl make regular trips to this city every four weeks. On this trip she stopped at Boston, New York, and Norfolk en route south, the Philadelphia shipment of paper being larger than that of the combined Boston and New York cargo. Some of the paper discharged here will be distibuted throughout the South and Southwest on a vessel of the Southern Steamship Company of Houston, Tex. All the shipments of paper were handled without damage through the installation of special modern appliances for handling of news print rolls. The vessel was consigned to the Furness-Withy Company.

Fire Destroys Quarters of the Kardon Paper Co.

Fire starting in the stock room in the front of the building owned by the Kardon Paper Company, at 218 and 224 Pine street, resulted in the loss of more than $5,000 worth of paper stock to the firm. The efforts of the fire fighters confined the flames to the fourth floor front, where the cardboard used in the manufacturing of folding boxes was stored. The Kardon Company is engaged in paper distribution and folding box manufacturing, with Morris Kardon at its head.

Riegel & Co. Add New Papers

Among the newest of papers to be added to the stocks carried by the paper distribution firm of Riegel & Co., Sixth and Cherry streets, are the Direct Sales Bond, manufactured by the Appleton Coated Paper Company, of Appleton, Wis. The new stocks are being broadly distributed among the printing and direct by mail advertising concerns as an economy paper used by the consumer to reduce the cost of postage. Its value for this sort of work lies in its dual usages. On one side the paper is plain white sulphite bond, while the opposite side comes coated and in white or contrasting colors, the bond side being used for letter or circularizing, while the coated side is adapted for illustrating and advertising matter, eliminating the use of additional and separate papers for the two purposes and combining them in a single sheet. Other recent additions to the stocks of the company are the Dill & Collins Company's New English Finish Flat Rock Plate, and the Dulbrite, which were added to the lines manufactured by the makers of the famous Diamond D papers this year.

Graphic Art Lender's Exhibit

The Philadelphia firm of D. L. Ward Company, 28 South Sixth street, will be represented at the coming Direct Mail Advertisers' Convention, to be held in Boston, October 28 to 30, through the personal appearance of President George W. Ward, of the company, and its secretary, William H. Hentz, and in the Graphic Arts Leaders' Exhibit, which now is assembled at the Ward Company's headquarters here. This exhibit will be entirely removed to the Ad Convention and will be one of the outstanding features in the displays of the direct by mail literature, both from the angle of the printer's art and from its combination in the usage of papers.

SOLVAY

STANDARD IN SODA SINCE 1881

Quality and service guaranteed by the Largest Source of Supply

Soda Ash

Caustic Soda

Over 75 stock distributing points assure prompt shipment with minimum transportation charges.

The Solvay Process Co.

Detroit, Mich.; SYRACUSE, N. Y.; Hutchinson, Kas.

Sales Department:
WING & EVANS, INC.
40 Rector Street, New York

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Clay

300 tons daily

AMERICAN MADE FOR AMERICAN TRADE

Some portion of our clay production is *pulverized*. That part of it which is *pulverized* is, as far as we know, the only *pulverized clay* which is washed and refined before being pulverized. This insures greater freedom from impurities and an exceedingly uniform product.

Prices on M-E pulverized clay may surprise you even considering this additional treatment.

Let us submit samples and quote you

THE

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110 William St.,
NEW YORK

POTDEVIN

PAPER WAXING

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CENTER SEAM ENVELOPE

MACHINERY

POTDEVIN MACHINE CO.

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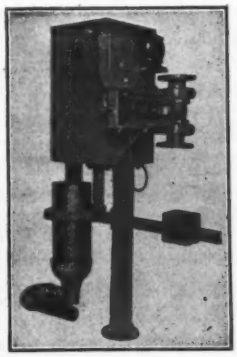

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SOMETIMES!

Why not use the "TRIMBEY" Regulator and have them—

ALL THE TIME!

More than 400 in use in the paper and pulp mills of North America and Europe.

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TRIMBEY MACHINE WORKS

Glens Falls, N. Y.

"Made in Canada"? Yes.

Market Quotations

Quoted by Hepburn & Co., No. 74 Broadway, N. Y. City, to whom all inquiry for quotations on these or any other Securities is referred.

BONDS	BID	OFFERED
Abitibi Power and Paper, Gen. 6s 1940	101	103*
Advance Bag and Paper, 7s 1943	98	100*
Bastrop Pulp and Paper, 7½s 1932	104	108*
Brompton Pulp and Paper, 6s 1927	94	96
Beaver Board, 8s 1933	92	94
Bedford Pulp and Paper, 6½s 1942	98	...
Berkshire Hills Paper Co., 8s 1941	...	80
Beaver Products Corp., 7½s 1942	104	106
Belgo Canadian Paper, 6s 1943	101	103
Brown Paper Co., 8s 1931	102	...
Berlin Mills, 5s 1931	98	...
Bryant Paper Co., 6s 1942	99	102*
Brown Company Serial, 6s 1925-43	97	100
Central Paper 6½s 1925-42	91	94
Cape Breton Pulp and Paper, 6s 1932	100	...
Carthage Sulphite Pulp and Paper, 8s 1941	40	50
Champion Coated Paper Co., 6s 1924-34	...	102
Champion Fibre Co. Notes, 8s 1930	101	...
Cherry River Paper, 5s 1929	98	100*
Donnaconna Paper Co., Ltd., 6s 1940	99	101
Eddy Paper, 7½s 1931	100	...
Eagle Paper, 6½s 1932	96	100
Escanaba Paper, 6s 1933	87	95*
Fox River Paper, 7s 1931	100	...
Fort Orange Paper Co., 7s 1942	95	99
Gilbert Paper Co., 7s 1927	96	...
Gilbert Paper Co., 6½s 1923-29	101	102*
Hammermill Paper Co., 6s 1930-39	99	...
Hercules Corp'n, 8s 1936	100	...
Hummell, Ross Fibre Corp., 7s 1925	90	...
Jessup & Moore Paper Co., 6s 1939	97	...
Kenmore Pulp and Paper Co., 6s 1937	90	...
Lake Superior Pulp and Paper, 6s 1941	105	...
Mattagami Pulp and Paper, 6s 1937	90	...
Marinette & Menominee, 7½s 1936	104	...
National Paper and Type, 6s 1947	96	99*
Oswego Falls Corp., 8s 1942	102	105
Orono Pulp and Paper, 5s 1941	93	96*
Orono Pulp and Paper, 6s 1943	97	100*
Oxford Paper Co., 6s 1947	101	...
Paterson Parchment Paper, 5½s 1927-28	98	100
Paterson Parchment, 6s 1938	98	100*
Parker Young Co., 6½s 1944	92	96
Price Bros. & Co., Ltd., 6s 1943	98	101
Provincial Paper Mills, Ltd., 6s 1940	97	...
Riordon Co., Series A, 8s 1940	115	118
Riordan Paper, 6s 1924	99	101
Riordan Pulp and Paper, Ltd., 6s, 1929	33	35
River Raisin Paper, 8s 1936	104	106
St. Maurice Paper Co., Ltd., 5½s, 1929	98½	99¼
St. Regis Paper, 6½s, 1929-35	97	102
Smith (Howard) Paper Mills, 7s 1941	96	99
Smith (Howard) Paper Mills, 6s 1934	98	...
St. Croix Paper, 5s 1923-37	95	...
Stevens & Thomson Paper, 6s 1942	86	90
Spanish River Pulp and Paper, 6s 1931	105	108
Spanish River Pulp and Paper, Gen 8s 1941	106	109
Ticonderoga Pulp and Paper Co., 6s, 1940	91	95
Ticonderoga Pulp & Paper 1-5, 1930	88	93
S. D. Warren Company, 6s, 1945	97	100
Whittaker Paper, 1st 7s 1942	98	...
Watab Paper Co., 6½s 1942	100	104
Waterway Paper Products, 7s 1924-27	95	100
Wayagamack Pulp and Paper, Ltd., 6s 1951	88	90

STOCKS	BID	ASKED
Abitibi Power and Paper, Com	67	70
Abitibi Power and Paper, Pfd	103	...
Advance Bag and Paper, Com	8	12*
Advance Bag and Paper, Pfd	77	...
Beaver Board, Com	4	6
Beaver Board, Pfd	32	35
Bryant Paper, Cap	12	...
Bryant Paper, Pfd	9	...
Chicago Mill & Lumber Co., Com	63	...
Chicago Mill & Lumber Co., Pfd	98	104
Crown Williamette, Com	93	98*
Crown Williamette, 7% A, Pfd	98	SW
Donnaconna Paper, Com	49	54
Donnaconna Paper, Pfd	95	100
Great Northern Paper, Cap	260	270
Jessup & Moore Paper, Pfd	80	85
International Paper Co., Com	61	63
International Paper Co., Pfd. 6%	75	80
Mengel Company, Com	60	65
Mengel Company, Pfd	83	93
Oxford Papers, Com	93	97
Oxford Paper Co., Pfd	98	...
Provincial Paper Co., Com	94	98
Provincial Paper Co., Pfd	99	...
Price Brothers, Cap	47	50
St. Croix Paper	185	215
St. Maurice Paper Co., Cap	83	85
St. Regis Paper Co., Cap	54	56
Spanish River Pulp and Paper, Com	97	101
Spanish River Pulp and Paper, Pfd	109	...
Ticonderoga Pulp and Paper, Cap	145	...
West Virginia Pulp and Paper, Cap	...	47
West Virginia Pulp and Paper, Pfd	95	105
Whittaker Paper, Com	50	...
Whittaker Paper, Pfd	60	70

* Nominal.

Paper
(F. o. b. Mill)

Ledgers	11.00	@38.00
Bonds	9.00	@45.00
Writings—		
Extra Superfine	14.00	@32.00
Superfine	14.00	@32.00
Tub Sized	10.00	@15.00
Engine Sized	8.00	@11.00
News—		
Rolls, contract	3.50	@ 3.90
Rolls, contract, '26	3.25	@ 3.65
Rolls, transit	3.75	@ 4.25
Sheets	4.00	@ 4.25
Side Runs	3.25	@ 4.00
Book, Cased—		
S. & S. C.	7.00	@ 9.75
M. F.	6.25	@ 8.75
Coated and Enamel	8.00	@15.00
Lithograph	8.00	@15.00
Tissues—Per Ream		
White No. 1	.70	@ .90
Anti-Tarnish	1.10	@ 1.90
Colored	1.00	@ 2.00
White No. 2	.65	@ .75
Kraft	.85	@ .95
Manila	.70	@ .80
Kraft—		
No. 1 Domestic	5.75	@ 6.25
No. 2 Domestic	5.10	@ 5.50
Southern	4.75	@ 5.00
Imported	5.50	@ 5.75
Manila—		
No. 1 Jute	9.00	@ 9.25
No. 2 Jute	7.75	@ 8.50
No. 1 Wood	4.75	@ 5.25
No. 2 Wood	4.00	@ 4.50
Butchers	3.75	@ 4.25
Fibre Papers—		
No. 1 Fibre	4.50	@ 5.00
No. 2 Fibre	4.25	@ 4.75
Common Bogus	2.50	@ 2.75
S. Screening	3.00	@ 3.50
Card Middles	4.00	@ 5.00
Boards—per ton—		
News	45.00	@47.50
Straw	57.00	@60.00
Chip	42.00	@45.00
Binders' Boards	72.50	@77.50
Sgl. Mla. Ll. Chip	58.00	@60.00
Wood Pulp	70.00	@75.00
Container	62.50	@67.50
Sulphate Screenings—		
Coarse	.75	@ .85
Refined	1.75	@ 2.00
Ground Wood—		
Screenings	20.00	@25.00
Glassine—		
Bleached, basis 25 lbs.	13.00	@16.00
Bleached, basis 20 lbs.	15.00	@16.00

Mechanical Pulp
(Ex-Dock)

No. 1 Imported (F. o. b. Mill)	33.00	@37.00
No. 1 Domestic	28.00	@32.00

Chemical Pulp
(Ex-Dock, Atlantic Ports)

Sulphite (Imported)—		
Bleached	4.00	@ 4.50
Easy Bleaching	3.25	@ 3.45
No. 1 strong unbleached	2.90	@ 3.25
No. 2 strong unbleached	2.75	@ 2.85
No. 1 Kraft	2.95	@ 3.20
Sulphate—		
Bleached (F. o. b. Pulp Mill)	3.75	@ 4.00
Sulphite (Domestic)—		
Bleached	4.00	@ 4.50
Easy Bleaching Sulphite	3.00	@ 3.25
News Sulphite	2.65	@ 2.80
Mitscherlich	3.25	@ 3.75
Kraft (Domestic)	3.00	@ 3.50
Soda Bleached	4.00	@ 4.25

Domestic Rags
New Rags

Prices to Mill f. o. b. N. Y.

Shirt Cuttings—		
New White, No. 1	14.25	@15.00
New White, No. 2	8.00	@10.00
Silesias No. 1	10.50	@11.50
New Unbleached	14.00	@15.00
Washables	6.50	@ 9.25
Fancy	9.75	@10.25
Blue Overall	11.50	@11.75
New Blue Prints	7.50	@ 8.50
New Soft Blacks	5.75	@ 6.20
Mixed Khaki Cuttings	7.00	@ 8.00
Pink Corset Cuttings	10.25	@10.75
Pink Muslin	10.00	@10.50
New Light Seconds	3.25	@ 3.50
O. D. Khaki Cuttings	7.00	@ 8.00
Men's Corduroy	6.25	@ 6.75
New Mixed Blacks	4.00	@ 4.50

Old Rags

White, No. 1—		
Repacked	6.50	@ 7.50
Miscellaneous	6.50	@ 7.00
White, No. 2—		
Repacked	4.00	@ 4.25
Miscellaneous	3.50	@ 3.75
St. Soiled, White	2.90	@ 3.00
Thirds and Blues—		
Repacked	3.75	@ 4.00
Miscellaneous	3.00	@ 3.25
Black Stockings	3.75	@ 4.25
Roofing Rags—		
Cloth Str.ppings	2.35	@ 2.45
No. 1	2.35	@ 2.45
No. 2	2.40	@ 2.50
No. 3	2.10	@ 2.20
No. 4	2.00	@ 2.10
No. 5A	1.50	@ 1.75

Foreign Rags

New Light Silesias	10.50	@11.25
Light Flannelettes	10.50	@12.00
Unbleached Cottons	13.50	@15.00
New White Cuttings	13.50	@15.00
New Light Oxfords	10.50	@11.50
New Light Prints	9.00	@10.00
New Mixed Cuttings	4.25	@ 4.50
New Dark Cuttings	4.00	@ 4.50
No. 1 White Linens	10.00	@11.00
No. 2 White Linens	7.25	@ 8.25
No. 3 White Linens	6.25	@ 6.75
No. 4 White Linens	4.50	@ 5.50
Old Extra Light Prints	4.25	@ 4.50
Ord. Light Prints	3.25	@ 3.75
Med. Light Prints	2.50	@ 3.00
Dutch Blue Cottons	3.50	@ 4.00
Ger. Blue Cottons	3.00	@ 3.25
Ger. Blue Linens	4.25	@ 4.75
Checks and Blues	3.25	@ 3.50
Linsay Garments	2.40	@ 2.50
Dark Cottons	2.25	@ 2.35
Shoppery	2.20	@ 2.30
French Blues	3.75	@ 4.25

Bagging
Prices to Mill F. o. b. N. Y.

Gunny No. 1—		
Foreign	3.15	@ 3.25
Domestic	3.15	@ 3.25
Wool Tares, light	2.65	@ 2.75
Wool, Tares, heavy	2.70	@ 2.80
Bright, Bagging	2.55	@ 2.65
Mixed Bagging	2.30	@ 2.40
Sound Bagging	2.10	@ 2.20
Roofing Bagging	1.90	@ 2.00
Small Mixed Rope	2.00	@ 2.25
Manila Rope—		
Foreign	5.50	@ 6.00
Domestic	6.50	@ 7.00
New Bu. Cut	3.60	@ 3.85
Hessian Jute Threads—		
Foreign	4.00	@ 4.25
Domestic	3.25	@ 3.50

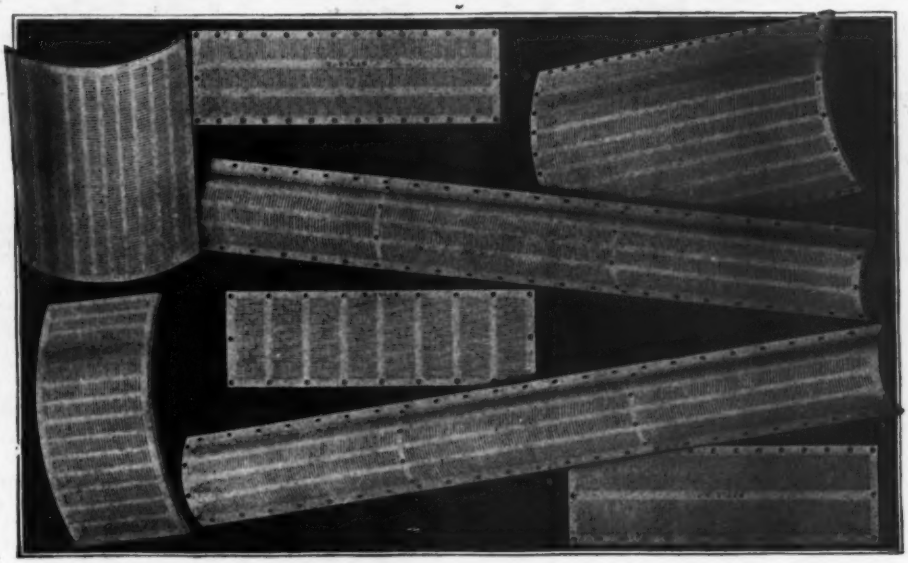
Old Waste Papers
(F. o. b. New York)

Shavings—		
Hard, White, No. 1	3.60	@ 3.80
Hard, White, No. 2	3.25	@ 3.50
Soft, White, No. 1	3.25	@ 3.50
Flat Stock—		
Stitchless	1.30	@ 1.40
Overissue Mag	1.30	@ 1.40
Solid Flat Book	1.20	@ 1.30
Crumpled No. 1	.85	@ .95
Solid Book Ledger	1.90	@ 2.00
Ledger Stock	1.50	@ 1.60
New B. B. Chips	.85	@ .95
Manilas—		
New Env. Cut	2.25	@ 2.40
New Cut No. 1	1.75	@ 2.00
Extra No. 1 old	1.20	@ 1.30
Print	.80	@ .90
Container Board	.70	@ .80
Bogus Wrapper	.80	@ .90
Old Krafts Machine compressed bales	2.25	@ 2.35
News—		
No. 1 White News	1.95	@ 2.05
Strictly Overissue	.80	@ .90
Strictly Folded	.70	@ .80
No. 1 Mixed Paper	.55	@ .60
Common Paper	.35	@ .45

Twines

Cotton—(F. o. b. Mill)—		
No. 1	.42	@ .45
No. 2	.41	@ .43
No. 3	.40	@ .42
India, No. 6 basis—		
Light	.19	@ .20
Dark	.17	@ .19
B. C., 18 basis	.39	@ .41
A. B. Italian, 18 Basis	.36	@ .41

WILLIAM A. HARDY & SONS CO.



FITCHBURG, MASSACHUSETTS, U. S. A.

BELLE ALKALI COMPANY, Belle, W. Va.

PURE CHLORINE In cylinders and tanks

BLEACH BELLE BRAND

CAUSTIC SODA 76%—Solid and Flake

Arnold, Hoffman & Co. Inc., Sole Agents

PROVIDENCE BOSTON NEW YORK PHILADELPHIA CHARLOTTE

Salomon Bros. & Co

IMPORTERS OF

All Grades of Rag and Paper Stock

200 FIFTH AVENUE, NEW YORK

COTTON WASTE :: LINTERS :: RAMIE

NATRONA PORUS ALUM

Liquid Chlorine

Single Unit Tank Cars | Multi-Unit Tank Cars 1-ton Containers | 150-lb. Cylinders

PENNSYLVANIA SALT. MFG. COMPANY

Commercial Sulphate of Alumina

Standard Bleaching Powder

PHILADELPHIA, PA.

FRANCIS HUGHES CO.

Dependable Packing

PAPER STOCK

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ATTERBURY BROS.

(INCORPORATED)

WOOD PULP, RAGS AND PAPER STOCK, FRENCH CASEINE

145 NASSAU STREET (Potter Bldg.) NEW YORK

Don't Guess at Important Matters

BOWSHER'S SPEED or MOTION INDICATOR is indispensable

in obtaining a UNIFORM speed of machinery, and in one of the most PROFITABLE little devices ever put in a mill. Will pay for itself in 30 days. Dial 12 in. in diameter. Weight, 10 lbs.

The N. P. BOWSHER CO., South Bend, Ind.

TABER PUMPS

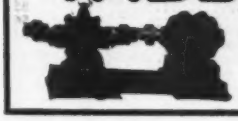

Fig. 510 illustrates Taber SL Double Suction Centrifugal Pump.

TABER PUMP COMPANY

BUFFALO, N. Y.

Finished Jute—			
Dark, 18 basis...	.30	@	.31
Light, 18 basis..	.28	@	.30
Jute Wrapping, 3-6 Ply—			
No. 1	.21	@	.23
No. 2	.21	@	.23
Tube Rope—			
4-ply and larger..	.15½	@	.17½
Fi [illegible]			
4-ply and larger..	.20	@	.28
4-ply	.21	@	.24
[illegible]	.22	@	.25
Unfinished India—			
Basis	.14½	@	.15½
Paper Makers' Twine			
Balls	.12	@	.13
Box Twine, 2-3 ply	.14	@	.15
Jute Rope	.30	@	.40
Ameri. Hemp, 6...	.30	@	.32
Sisal Hay Rope—			
No. 1 Basis	.14	@	.16
No. 2 Basis.....	.10	@	.12
Sisal Lath Yarn—			
No. 1	.14	@	.15
No. 2	.11	@	.13
Manila Rope	.18	@	.19

CHICAGO

Paper

F. o. b. Mill

All Rag Bond.....	35	@	40
No. 1 Rag Bond...	25	@	35
No. 2 Rag Bond...	14	@	25
Water Marked Sulphite	9	@	12
Sulphite Bond.....	7	@	10¼
Sulphite Ledger....	9	@	12
Superfine Writing..	18	@	24
No. 1 Fine Writing	14	@	18
No. 2 Fine Writing	12	@	14
No. 3 Fine Writing	9	@	12
No. 1 M. F. Book..	5½	@	7½
No. 1 S. & S. C. Book	6	@	7¼
Coated Book.....	7½	@	10
Coated Label.....	7½	@	10
News—Roll, mill...	3½	@	4¼
News—Sheets, mill	3¼	@	4¼
No. 1 Manila.....	4½	@	5½
No. 1 Fibre.....	4½	@	5
No. 2 Manila.....	4	@	4½
Butchers' Manila..	3¼	@	4¼
No. 1 Kraft.....	6	@	6½
No. 2 Kraft (Southern Grade).....	4¼	@	5
No. 2 Kraft (Northern Grade).....	5	@	5¼
Wood Tag Boards.	4¼	@	6½
Sulphite Screenings	3	@	3¼
Manila Tissue, 24x36 sheet	7¼	@	7¼
White Tissue, 20x30 sheet	7¼	@	7½
Boards, per ton—			
(Delivered Central Territory)			
Plain Chip 45.00		@	47.50
Solid News.....47.50		@	50.00
Manila Line Chip.57.50		@	60.00
Container Lined—			
(Delivered Central Territory)			
85 Test	—	@	75.00
100 Test	—	@	80.00

Old Papers

F. o. b. Chicago

Shavings—			
No. 1 Hard White	3.25	@	3.50
White Envel. Cuttings	3.15	@	3.25
No. 1 Soft Shav.	2.90	@	3.10
No. 1 Mixed....	1.45	@	1.50
No. 2 Mixed....	1.15	@	1.20
Ledger and Writings	1.55	@	1.60
Solid Books	1.45	@	1.50
No. 1 Light Books	1.00	@	1.05
Blanks	2.00	@	2.10
Kraft	2.45	@	2.50
New Kraft Cuts.	2.70	@	2.80
Manila Envelope Cuttings	2.50	@	2.60
Ex. No. 1 Manila..	2.25	@	2.35
Print Manila	1.05	@	1.10
Folded News (oversize)	.90	@	.95
Old Newspapers—			
No. 1	.80	@	.85
No. 2	.65	@	.70
Mixed Papers—			
No. 1	.75	@	.80
No. 2	.55	@	.60
Straw Clippings....	.75	@	.80
Binders C [illegible]	.75	@	.80
Roofing Stocks, f. o. b. Chicago, Net Cash—			
No. 1.....47.00		@	52.00
No. 2.....45.00		@	50.00
No. 3 .....43.00		@	48.00
No. 4.....41.00		@	46.00

BOSTON

Paper

Ledgers—			
Sulphite	.08½	@	.18
Rag content	.18	@	.36½
All Rag	.38	@	.50
Bonds—			
Sulphite	.07½	@	.10½
Rag Content.....	.17	@	.45
All Rag	.36½	@	.51
Writings	.08	@	.20
Superfines	.22	@	.50
News	.04	@	.04½
Book, Super	.08	@	.10
Book, Coated	.09	@	.14
Coated Litho.....	.09½	@	.15
Label	.09½	@	.15
Jute Manila No. 1.	.11	@	.12
Manila, Sul. No. 1.	.05	@	.05
Manila, Sul. No. 2.	.03¾	@	.04½
No. 1 Kraft.....	.05¾	@	.06½
No. 2 Kraft.....	.05¼	@	.05½
Common Bogus....	.02½	@	.02¾
Straw Board	—	@	50.00
News Board	—	@	50.00
Chip Board	—	@	47.50
Single Manila Pulp lined board 57.50		@	60.00
Single White, patent coated board 75.00		@	82.50
Wood Pulp Board..80.00		@	85.00
Binder Boards.....75.00		@	85.00
Tarred Felts—			
Regular 61.00		@	63.00
Slaters 66.00		@	68.00
Best Tarred, 1 Ply, roll	1.50	@	1.60
Best Tarred, 2 Ply, roll	1.70	@	1.80
Best Tarred, 3 Ply, roll	2.00	@	2.10

Old Papers

Shavings—			
No. 1 Hard White	3.75	@	4.00
White Blank News	1.75	@	2.00
Manila Env. Cuttings	2.80	@	3.00
No. 2 Hard White	3.25	@	3.50
No. 1 Soft White..	.02¾	@	.03
No. 2 Soft White..	.02½	@	.03
No. 1 Mixed.....	1.60	@	1.75
No. 2 Mixed.....	1.25	@	1.50
Solid Ledger Stock	2.00	@	1.75
No. 1 Books, Heavy	1.25	@	—
No. 1 Books, Light	—	@	1.25
No. 1 New Manila.	2.50	@	2.60
No. 1 Old Manila.	1.75	@	2.00
Print Manila	1.05	@	1.20
Old Kraft	2.25	@	2.35
Overissue News ...	1.00	@	1.10
Old Newspapers ...	.70	@	.85
No. 1 Mixed Paper	.60	@	.47½
Box Board, Chip..	.60	@	.50

Bagging

Price f. o. b. Boston

Gunny No. 1—			
Foreign	—	@	3.37½
Domestic	—	@	3.50
Manila Rope	—	@	5.50
Mixed Rope	2.00	@	—
Scrap burlaps ...	—	@	2.37½
Wool Tares, heavy.	2.50	@	2.75
Mixed Strings...	—	@	1.90
New Burlap Cutting	—	@	3.25

Domestic Rags (New)

Price f. o. b. Boston

Shirt Cuttings—			
New White No. 1	.15½	@	.15
Silesias, No. 1...	.11	@	—
New Unbleached.	.14½	@	.15
Washable	.07¾	@	.08
Fancy	.10½	@	—
Cottons—According to Grades—Blue—			
Blue overalls.....	12½	@	—
New Black, soft...	.07	@	—
Khaki Cuttings.....	.07	@	—
Corduroy	.04	@	.05
New Canvas	.12	@	.12½

Domestic Rags (Old)

Price f. o. b. Boston

White No. 1 .....10.00		@	—
Repacked	9.50	@	—
Miscellaneous	8.50	@	—
White No. 2—			
Repacked	6.50	@	—
Miscellaneous.....	5.25	@	—
Thirds and Blues—			
Repacked	5.00	@	—
Miscellaneous	3.50	@	—
Roofing Stock—			
No. 1	2.15	@	—
No. 2	1.90	@	—
No. 3	1.75	@	—
No. 4	1.90	@	—

PHILADELPHIA

Paper

Bonds	.07	@	.40
Ledgers	.11	@	.40
Writings—			
Superfine	.13	@	.18
Extra fine	—	@	.22
Fine	.20	@	.26½
Fine, No. 2.....	.16	@	.25
Fine, No. 3.....	.12	@	.20
Book, M. F.....	.06¾	@	.07
Book, S. S. & C...	.06	@	.07½
Book, Coated	.11	@	.16
Coated Lithograph.	.09	@	.12
Label	.09	@	.12
News	.03¾	@	.04
No. 1 Jute Manila.	.09½	@	—
Manila Sul., No. 1	.04½	@	.06
Manila No. 2.....	.04	@	.04½
No. 2 Kraft.....	.05¼	@	.05¾
No. 1 Kraft.....	.06¼	@	.06½
Common Bogus	.02¾	@	—
Straw Board	56.00	@	55.00
News Board	47.50		
Chip Board	50.00		
Wood Pulp Board.	4.50	@	5.00
(Carload Lots)			
Binder Boards—			
Per ton 75.00		@	80.00
Carload lots 65.00		@	70.00
Tarred Felts—			
Regular 66.00		@	68.00
Slaters 70.00		@	72.00
Best Tarred, 1-ply (per roll)	1.85	@	1.95
Best Tarred, 2-ply (per roll)	1.55	@	1.70
Best Tarred, 3-ply.	2.10	@	2.15
No. 1 Mixed Paper	.65	@	.70
Common Paper....	.50	@	.60
Straw Board, Chip.	.60	@	.65
Binders Bd., Chip..	.60	@	.65

Domestic Rags—New

Price to Mill, f. o. b. Phila.

Shirt Cuttings—			
New White, No. 1	.13½	@	.14
New White, No. 2	.06	@	.08
Silesias, No. 1...	.10½	@	.11
New Unbleached.	.14	@	.14½
Washable	.07¼	@	.07¾
Fancy	.09½	@	.10
Cottons—according to grades—			
Blue Overall	.11	@	.12
New Blue.....	.04	@	.04¼
New Black Soft..	.06	@	.06¾
New Light Seconds	.03½	@	.03¾
Khaki Cuttings..	.06½	@	.07
Corduroy	.04	@	.04½

Bagging

F. o. b. Phila.

Gunny, No. 1—			
Foreign	3.00	@	3.25
Domestic	3.00	@	3.25
Manila Rope	4.75	@	6.00
Sisal Rope	2.50	@	—
Mixed Rope	1.00	@	1.25
Scrap Burlaps...	2.25	@	2.50
Wool Tares, heavy.	2.00	@	2.13
Mixed Strings...	1.25	@	—
No. 1, New Lt. Burlap	3.50	@	3.75
New Burlap Cuttings	3.25	@	3.50

Old Papers

F. o. b. Phila.

Shavings—			
No. 1 Hard White	3.50	@	3.60
No. 2 Hard White	3.00	@	3.25
No. 1 Soft White	2.60	@	2.70
No. 2 Soft White	2.00	@	2.20
No. 1 Mixed....	1.50	@	1.60
No. 2 Mixed....	1.00	@	1.10
Solid Ledger Stock.	1.75	@	1.90
Writing Paper	1.60	@	1.65
No. 1 Books, heavy	1.30	@	1.40
No. 2 Books, light.	1.20	@	1.25
No. 1 New Manila.	1.80	@	2.00
No. 1 Old Manila..	1.60	@	1.75
Print Manila.....	1.25	@	1.35
Container Manila..	1.00	@	1.10
Old Kraft	2.00	@	2.10
Over issue News...	.85	@	1.00
Old Newspaper....	.70	@	.75
New Canvas	.08¾	@	.09
New Black Mixed	.05	@	.05½
Old White, No. 1—			
Repacked	6.75	@	7.00
Miscellaneous ...	6.25	@	6.50
White, No. 2—			
Repacked	.05	@	.05¼
Miscellaneous ...	.04¾	@	.05
Thirds and Blues—			
Repacked	3.75	@	4.00
Miscellaneous ...	3.15	@	3.25
Black Stockings.	4.25	@	4.50
Roofing Stock—			
No. 1	2.00	@	2.15
No. 2	1.90	@	2.00
No. 3	1.25	@	1.35
No. 4	1.10	@	1.20
No. 5A	1.10	@	1.15
B	1.05	@	1.10
C	1.00	@	1.05

TORONTO

Paper

(Mill Prices to Jobbers f. o. b. Mill)

Bond—			
Sulphite	.10½	@	.12½
Light tinted	.11	@	.13½
Dark tinted	.12½	@	.15
Ledgers (sulphite).	—	@	.13
Ledgers No. 1.....	.36	@	—
Ledgers No. 2.....	.27	@	—
Writing	.09½	@	
Writing S. C.	.10	@	
News f. o. b. Mills—			
Rolls (carloads)..	3.50	@	—
Sheets (carloads).	—	@	4.25
Sheets (2 tons or over)	—	@	4.60
Book—			
No. 1 M. F. (carloads)	8.00	@	—
No. 2 M. F. (carloads)	7.50	@	—
No. 3 M. F. (carloads)	7.00	@	—
No. 1 S. C. (carloads)	8.50	@	—
No. 2 S. C. (carloads)	8.00	@	—
No. 3 S. C. (carloads)	7.50	@	—
No. 1 Coated and litho	14.50	@	—
No. 2 Coated and litho	13.50	@	—
No. 3 Coated and litho	12.75	@	—
Coated tinted	.15	@	—
Wrapping—			
Rag Brown	4.75	@	—
White Rag	5.25	@	—
"B" Manila	5.50	@	—
No. 1 Manila	6.50	@	—
Fiber	6.50	@	—
Kraft, M. F.....	7.00	@	—
M. G.	7.15	@	—

Pulp

(F. o. b. Mill)

Ground wood 30.00		@	32.50
Sulphite easy bleaching 60.00		@	65.00
Su'phite news grade	55.00	@	58.00
Sulphite, bleached	75.00	@	80.00
Sulphate 62.50		@	65.00

Old Waste Paper

(In carload lots, f. o. b. Toronto)

Shavings—			
White Env. cut..3.65		@	—
Soft White Book shavings	—	@	3.15
White Blk. News 1.70		@	—
Book and Ledger—			
Flat Magazine and Book Stock (old)1.25		@	—
Light and Crumpled Book Stock	1.10	@	—
Ledgers and Writings	1.40	@	—
Solid Ledgers ...	1.40	@	—
Manilas—			
New Manila Cut.	—	@	1.60
Printed Manilas..	1.10	@	—
Kraft	2.25	@	—
News and Scrap—			
Strictly Overissue	.90	@	—
Folded News ...	.90	@	—
No. 1 Mixed Papers	.70	@	—
Domestic Rags—			
Price to mills, f. o. b. Toronto		Per lb.	
No. 1 White shirt cuttings	.14½	@	.14¾
No. 2 White shirt cuttings	.08	@	.08½
Fancy shirt cuttings	.09¾	@	.10
No. 1 Old Whites..	—	@	—
Third and blues...	—		—